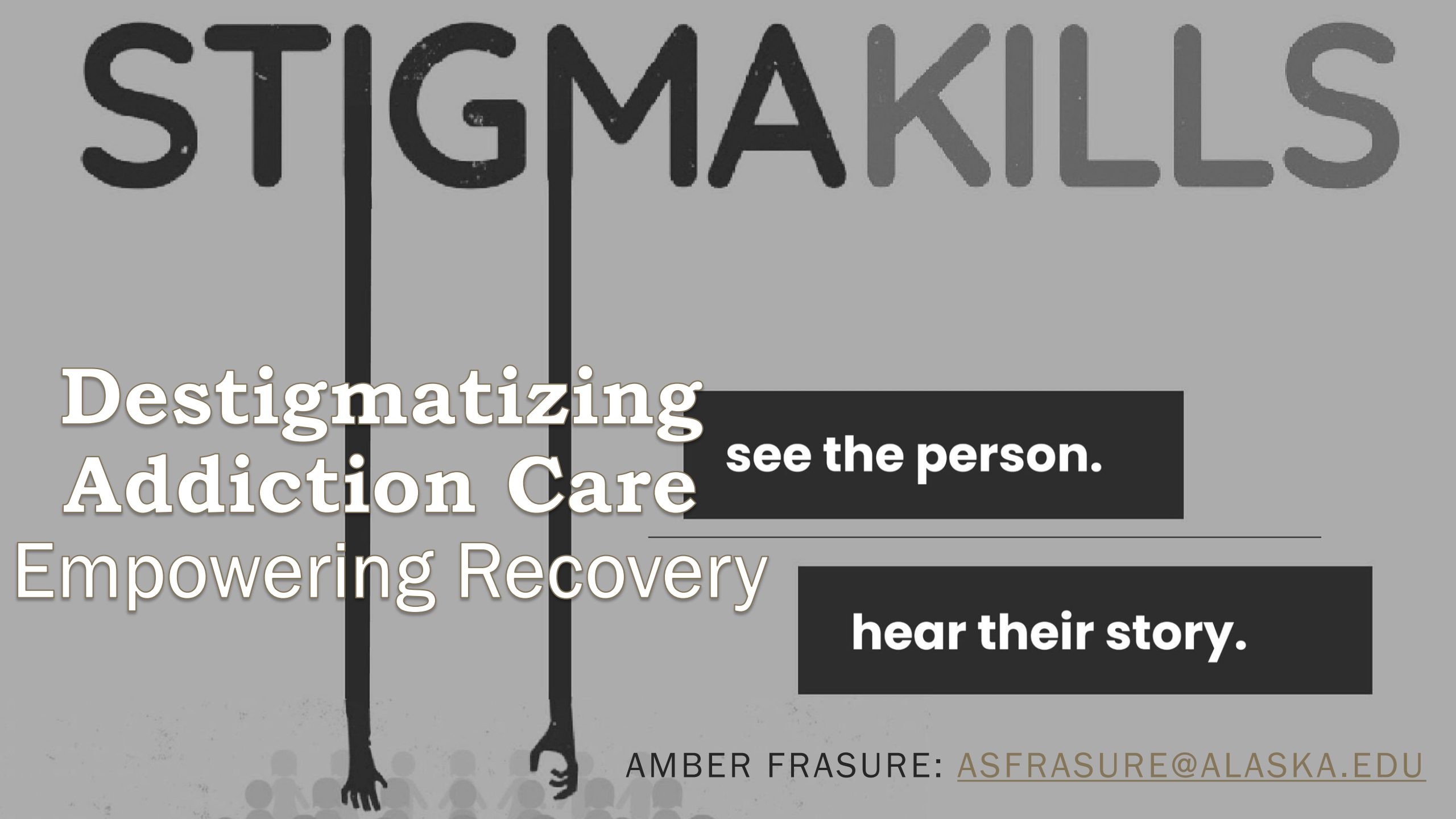
ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

Session 4:
Destigmatizing Addiction Care, presented by Amber Frasure
Alcohol Use Disorder Treatment, presented by Kena Desai, MD

These presentations were part of the one-day Fairbanks Syndemic Clinical Training: Addressing the Syndemic of Substance Use Disorders and Related Disease States held on April 9 and April 10, 2025.



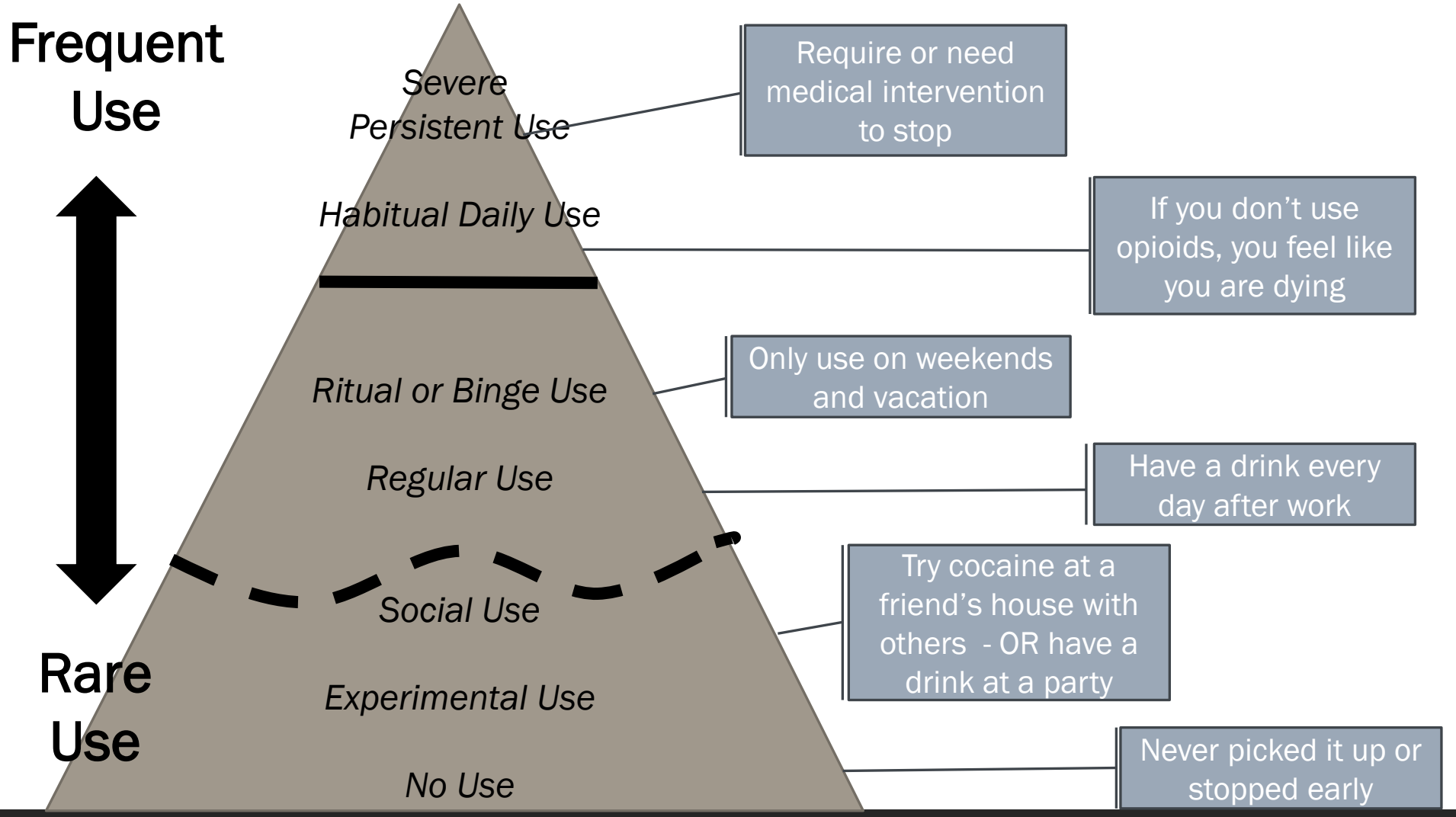
AMBER FRASURE: ASFRASURE@ALASKA.EDU

Think of a time when you felt misunderstood or dismissed by a professional.

Take a moment to ask yourself: "*What made this experience feel invalidating or frustrating?*"

THINK OF A TIME IN YOUR LIFE…

Spectrum Of Substance Use



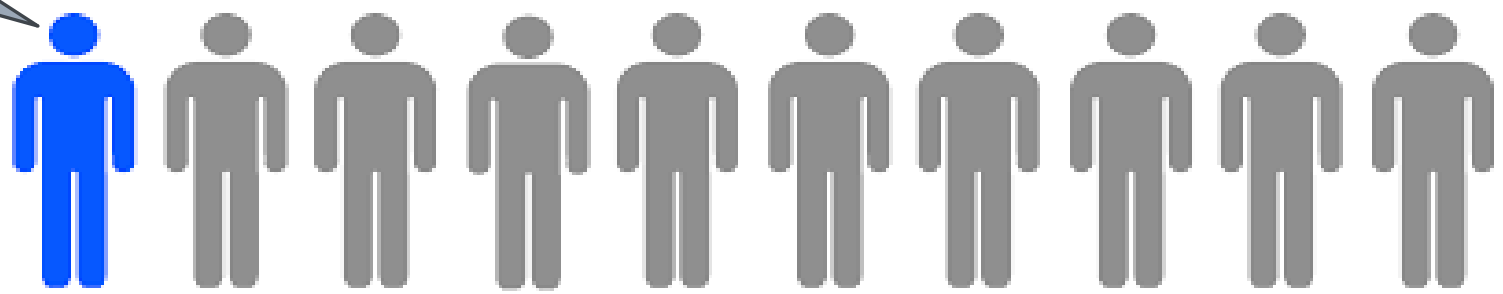
- Drug use happens on a continuum
- Drug use is complex and does not exist in a vacuum
- People will use drugs for different reasons and with different ends.
- Less than 20% of people that use drugs will stay in the severe persistent use end of the continuum

McLellan AT, Journal of Substance Abuse Treatment 2014

The Gap in Treatment

I got treatment!

10% of people who have a substance use disorder (SUD) are able to access treatment.



Stigma is cited as a primary reason people do not seek treatment (SAMHSA, 2018).

2015 National Survey on Drug Use and Health: Detailed tables. SAMHSA

Stigma Treats Addiction as an Affliction

Stigma is defined as a mark of disgrace or infamy, a stain of reproach, as on one's reputation (SAMHSA, 2018).

A social process reinforced by relations of power and control (Link & Phelan, 2001)	SUD are the most widely stigmatized public health issue.

A lack of respect for a person or a group of people because they have done something or have traits of which society disapproves.

They did it to themselves	They made poor decisions	They just don't have any self control	They weren't strong enough to kick it

Addiction has been portrayed more as a personal and moral failure than as a disease and health care issue. Addiction is a disease that affects a person's brain and behavior.

Only on weekends.	Needing a little something just to get through the day.	Have a great job and own their own house.	Never drink and drive.

Addiction is a disease, look at it as a health care issue.

Barry, C.L., McGinty, E.E., Pescosolido, B.A., & Goldman, H.H. (2014). Stigma, Discrimination, Treatment Effectiveness and Policy Support: Comparing Public Views about Drug Addiction with Mental Illness. Psychiatric Services, 65(10), 1269-1272.

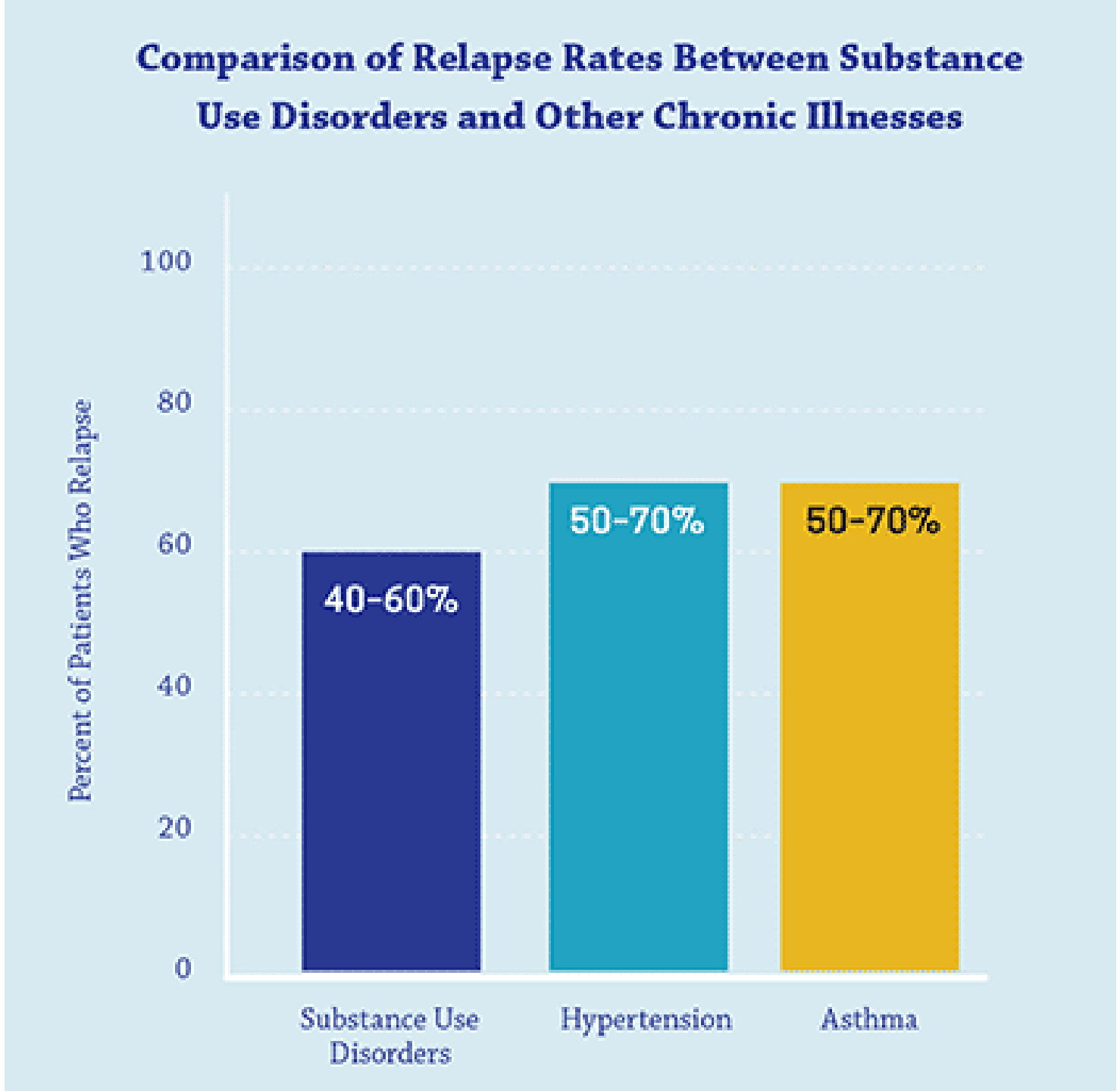
Changing the Narrative: Rates of Return to Use

Substance use falls along a continuum

Return to use is part of the process

Like other chronic diseases, SUD can be managed through appropriate treatment

Successful treatment for SUD means the person is thriving



Content: JAMA 2000. Graph: NIDA 2014.

Nora's Blog

Advancing reduction of drug use as an endpoint in addiction treatment trials

NIH National Institute on Drug Abuse

March 18, 2025 *By Dr. Nora Volkow*

Cite this article

"For many people trying to recover from a substance use disorder, perhaps for the majority, abstinence may be the most appropriate treatment objective... **Recognizing that recovery is often nonlinear, a more nuanced view of treatment is needed, one that acknowledges that there are multiple paths to recovery.** Expecting complete abstinence may be unrealistic in some cases and can even be harmful. It can pose a barrier to seeking and entering treatment and perpetuate stigma and shame."

https://nida.nih.gov/about-nida/noras-blog/2025/03/advancing-reduction-drug-use-endpoint-in-addiction-treatment-trials

Participant Engagement: Do You Agree or Disagree?

- Although it's hard to admit, sometimes I judge people who can't stop using drugs
- I understand the experience of being stigmatized as a person who uses drugs or as a member of another stigmatized group
- I trust people who use drugs as much as people who don't
- People who use drugs don't care about themselves
- People who use drug don't have the skills to participate in developing policies and programs at my organization

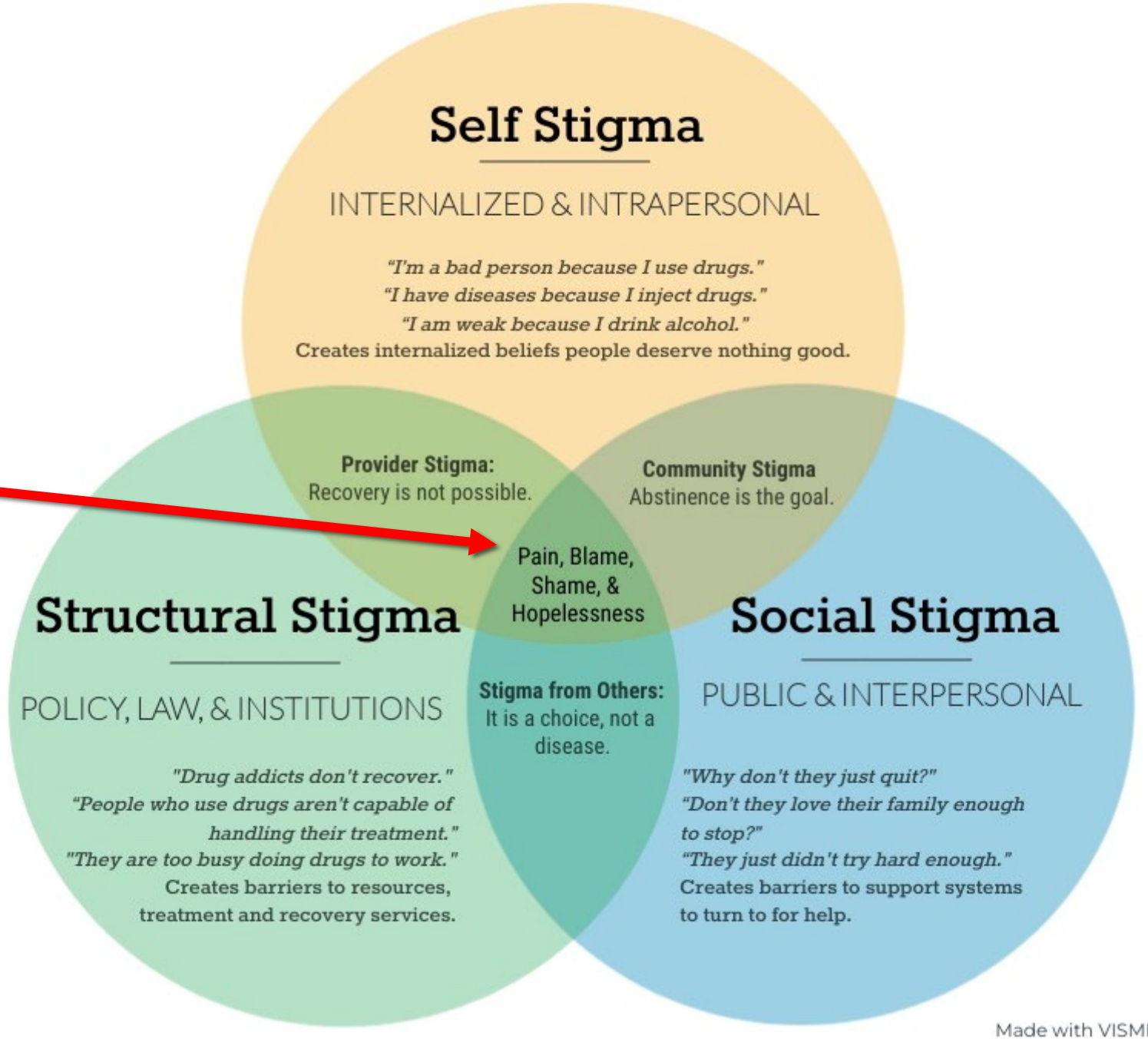
Intersection of Stigma

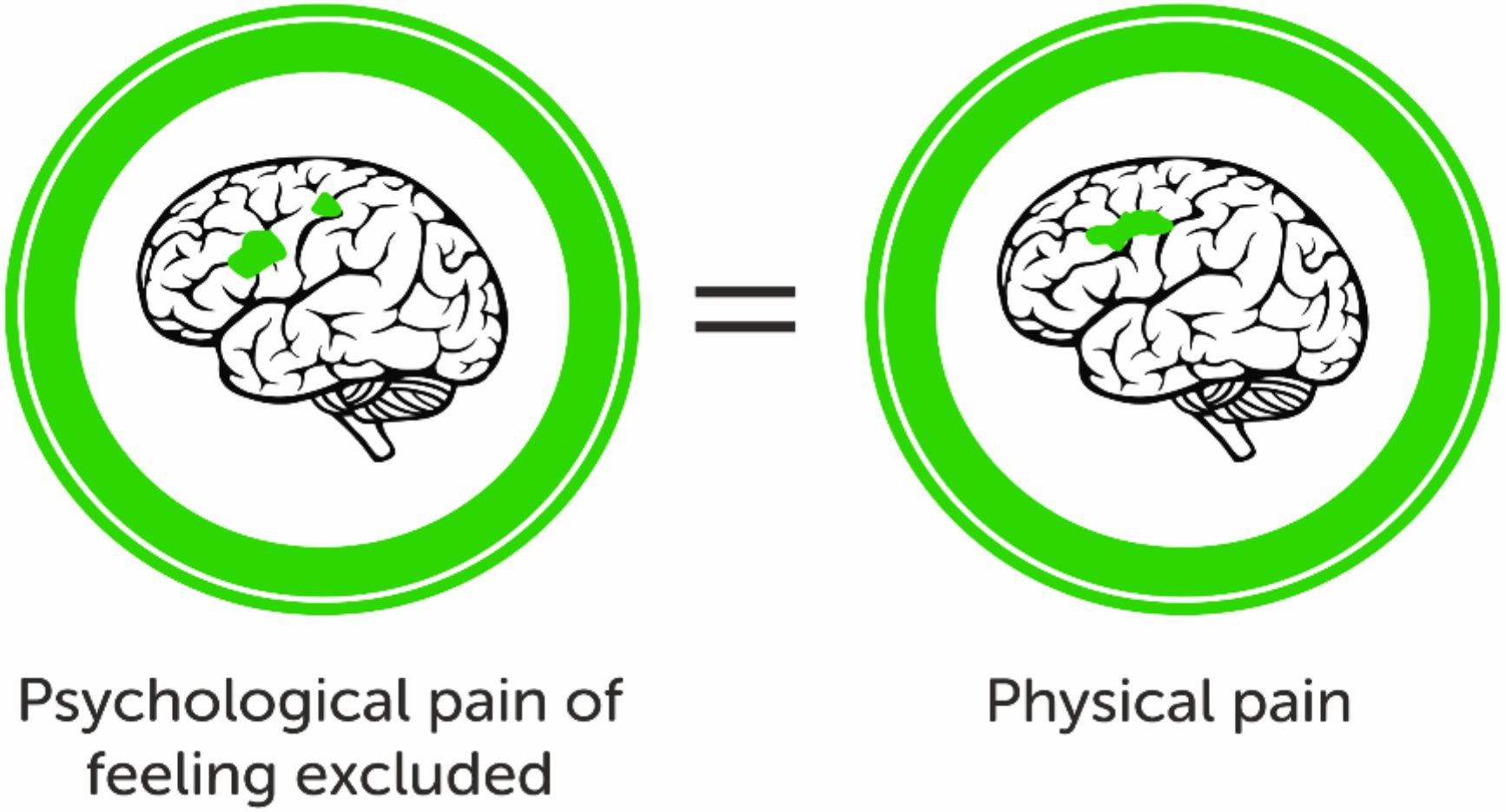
Stigma is a social process reinforced by relations of power and control (Link & Phelan, 2001)

Three “S” of Stigma

People live and experience stigma at the intersection of all three

(Barry et al., 2014).





Stigma is painful…

Psychological pain of stigma activated the same areas of the brain associated with physical pain (Eisenberger, Lieberman & Williams, 2003; Cikara & Fiske, 2011).

Stigma fuels shame – not guilt

"Every time we invalidate someone else's struggle with mental health, we reinforce the idea that they should struggle in silence."

The difference between shame and guilt

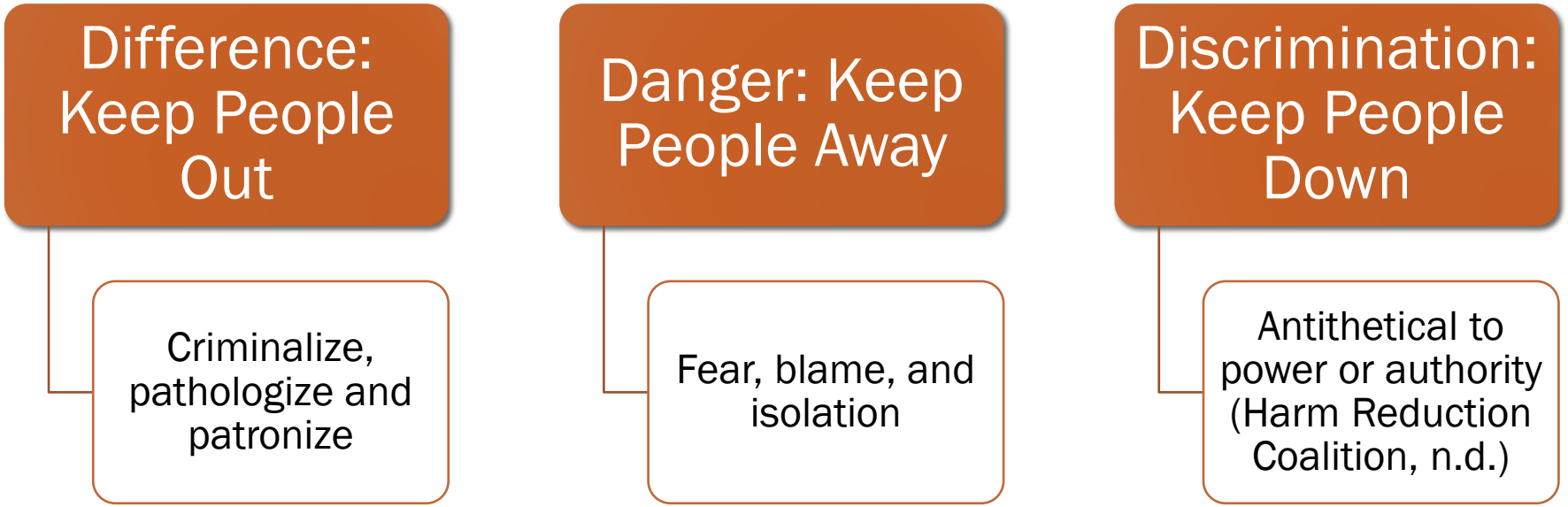
Shame: I am a bad person.

So I should hide myself.

Guilt: I might be doing some bad things, but I am not a bad person.

So I should ask for help.

Platform of Stigma

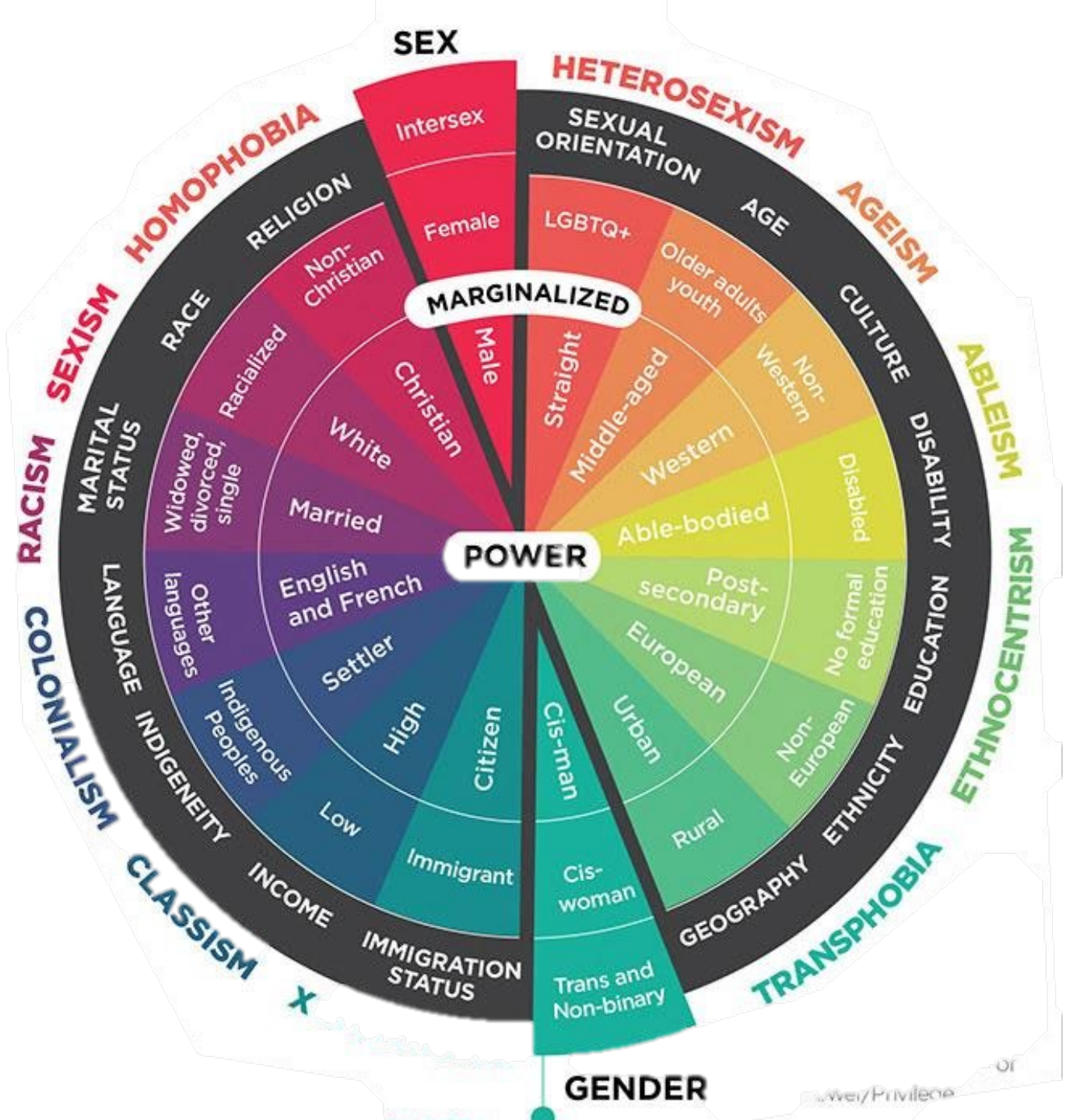


It’s not just addiction stigma

“There is no such thing as single-issue struggle because we do not live single-issue lives.” Audre Lorde

Just a few…

- HIV/Hep C
- Mental health and trauma
- Enivronmental factors
- People of color
- Justice involvement



https://cihr-irsc.gc.ca/images/igh_wheel-en.jpg

Racism Disguised as War on Drugs

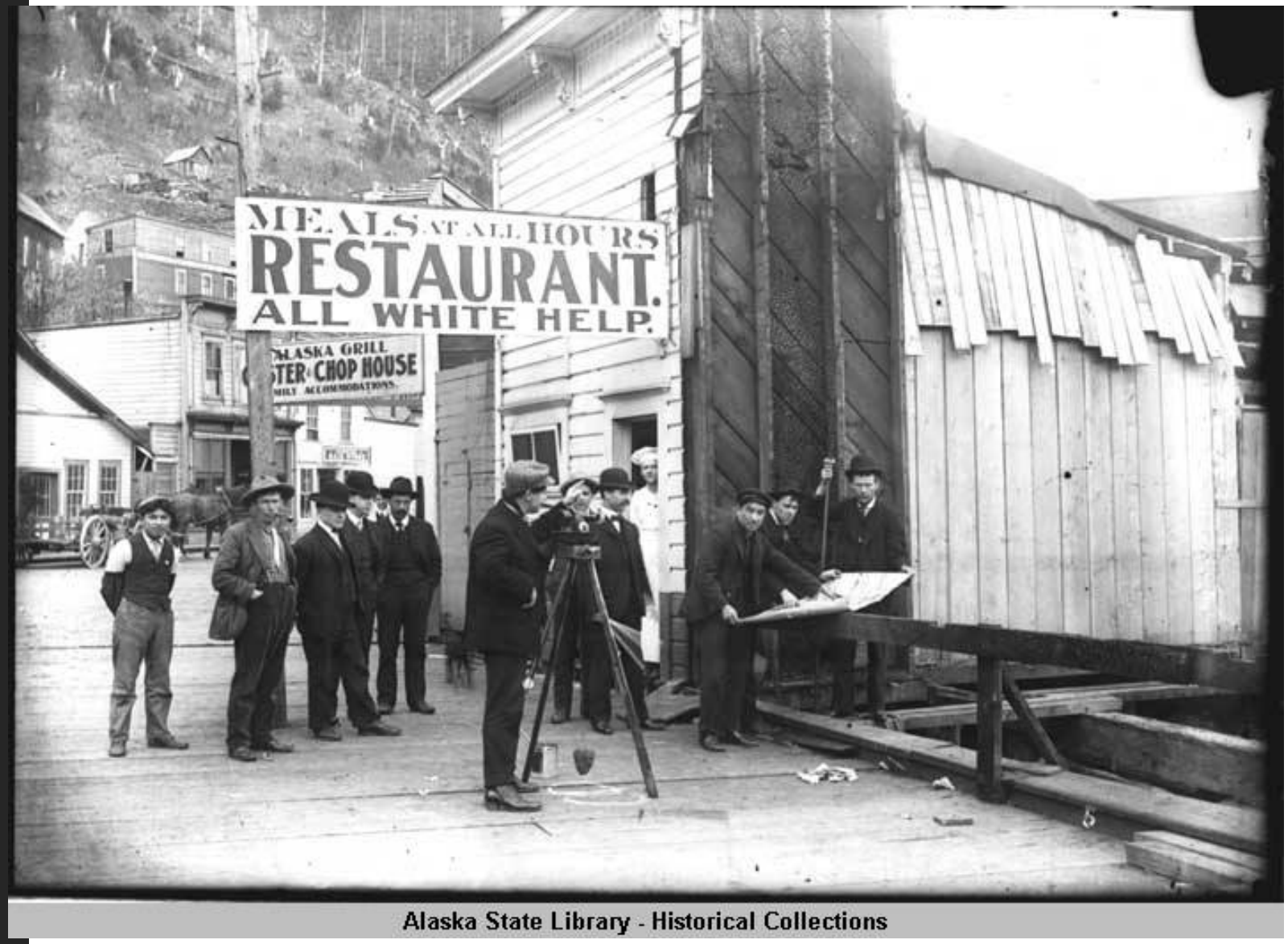
“You want to know what this [war on drugs] was really all about? The Nixon campaign in 1968, and the Nixon White House after that, had two enemies: the antiwar left and black people. You understand what I’m saying? We knew we couldn’t make it illegal to be either against the war or black, but by getting the public to associate the hippies with marijuana and blacks with heroin, and then criminalizing both heavily, we could disrupt those communities. We could arrest their leaders, raid their homes, break up their meetings, and vilify them night after night on the evening news. Did we know we were lying about the drugs? Of course we did.” ~ John Ehrlichman, Assistant to the President for Domestic Affairs under President Richard Nixon

The War on People

When we talk about stigma, we often talk about a person's different identities as separate, when in fact they intersect and impact experiences of stigma.

The War on Drugs and corresponding policies impact stigma experiences by people who use drugs and across the identities of multiple groups.

These individuals often have significant and complex histories, which may involve abuse, violence, loss, and associated trauma adversely affecting their ability to engage in and/or adhere with programming.



(Alaska State Library, Winter & Pond Photo Collection, P87-1050)

Trauma the "Gateway Drug": High Prevalence of Trauma Among Peoples with SUD

There is higher prevalence of trauma in people who experience SUD

Two thirds of people in substance use treatment report a history of childhood abuse and neglect

A study of male Veterans in an inpatient substance use treatment program reported higher rates of severe childhood trauma (77%) and lifetime PTSD (58%)

Women involved in substance use treatment report lifetime history of trauma (range from 55-99%) and half report a history of rape or incest (50%)

83% of AIAN adults have experienced some form of violence in their lifetime, including psychological aggression, physical violence by intimate partners, stalking, or sexual violence (National Institute of Justice, n.d.). While being more likely to need services, AIAN peoples are less likely to have access to services.

Adverse Childhood Experiences (ACE) has been described as the Real "Gateway Drug"

People who have experienced:

- 4 ACES are 5x more likely to drink excessively
- 5 ACES are 7-10x more likely to abuse illicit drugs
- 6+ ACES are 46x more likely to inject drugs
- Recent Summary: https://doi.org/10.32481/djph.2022.05.011

SAMHSA CSAT, 2000; Lawes, 2022; Triffleman et al., 1995; Najavits et al., 1997; Gov. Commission of Sexual and Domestic Violence, 2006; Ullman et al., 2014

Historical Trauma

"*Trauma is a chronic disruption of connectedness … trauma replaces patterns of connection with patterns of protection.*" – Stephen Porges

Historical trauma was defined as cumulative emotional and psychological wounding over the lifespan and across generations, emanating from massive group trauma (Brave Heart, 1995,1998, 1999, 2000).

Historical trauma differs from lifetime traumas and is associated with significant health concerns (Gone et al., 2019; Brave Heart, 2003)

HT consists of a constellation of reaction to massive group trauma (Evans-Campbell, 2008).

Addiction has been conceptualized as a symptom caused by trauma and loss caused by colonization (First Nations Health Authority, 2023).

(Choate, 1902)

Don’t Shoot Our Wounded

“Addiction should instead be called ‘ritualized compulsive comfort seeking’ which is a normal response to experiences of adversity, just like bleeding is a normal response to being stabbed.” - Dr. Marie Dezelic

Healthcare Implications: Impact experiences with services…

People judge me because I am a sex worker

There are no friendly healthcare services where I live

Alters beliefs "if they don't' care about their health, why should we?"

Discontinuation of services

Perpetuates labels and stereotypes

Lack of trust and engagement

Sometimes I don't have a place to live

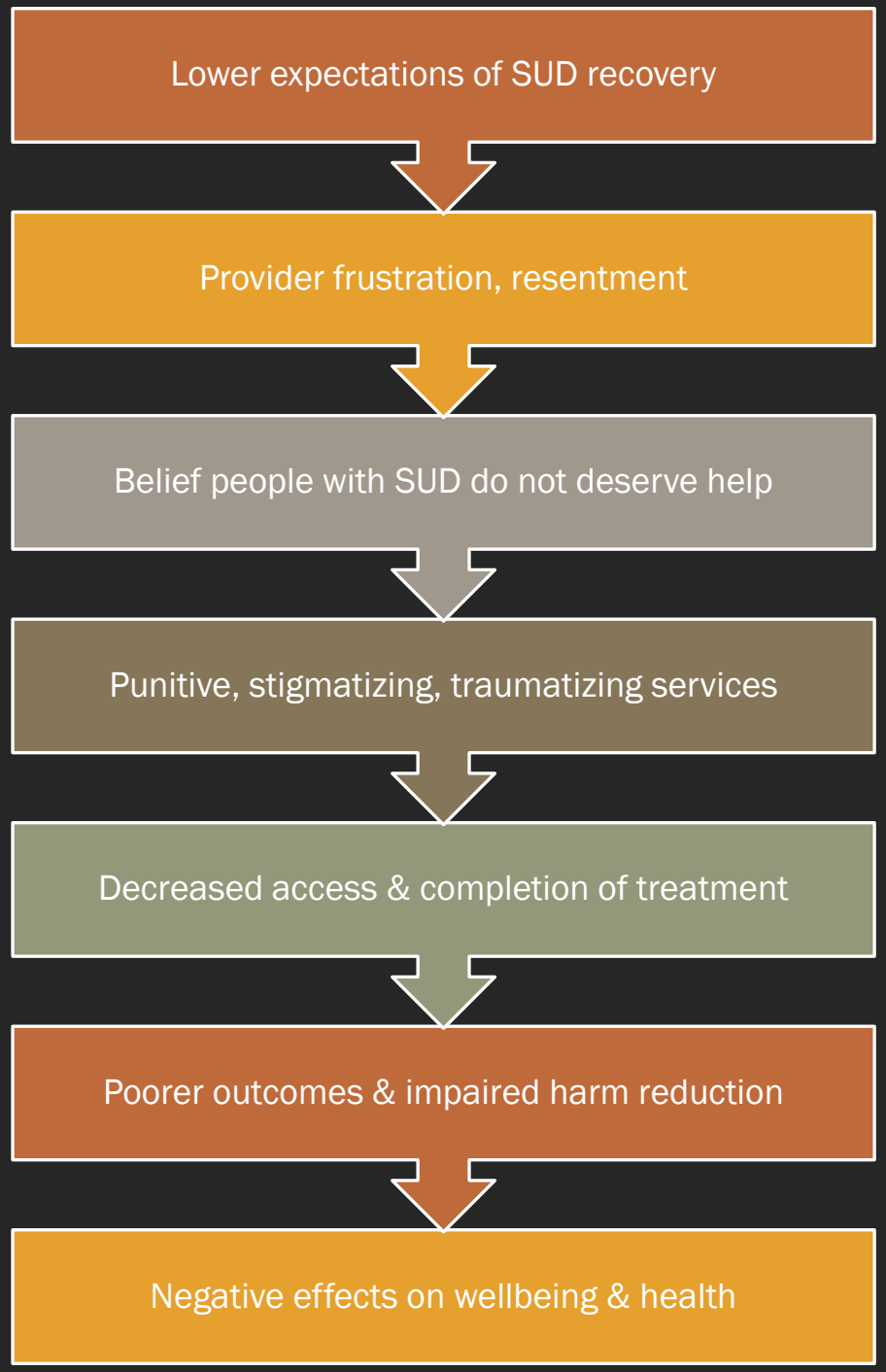
Healthcare workers don't trust me, as if I just want drugs

Internalized shame

Social isolation (both clients and staff)

I get arrested for drug use instead of helping me find ways to cope

Without access to clean equipment I have to share

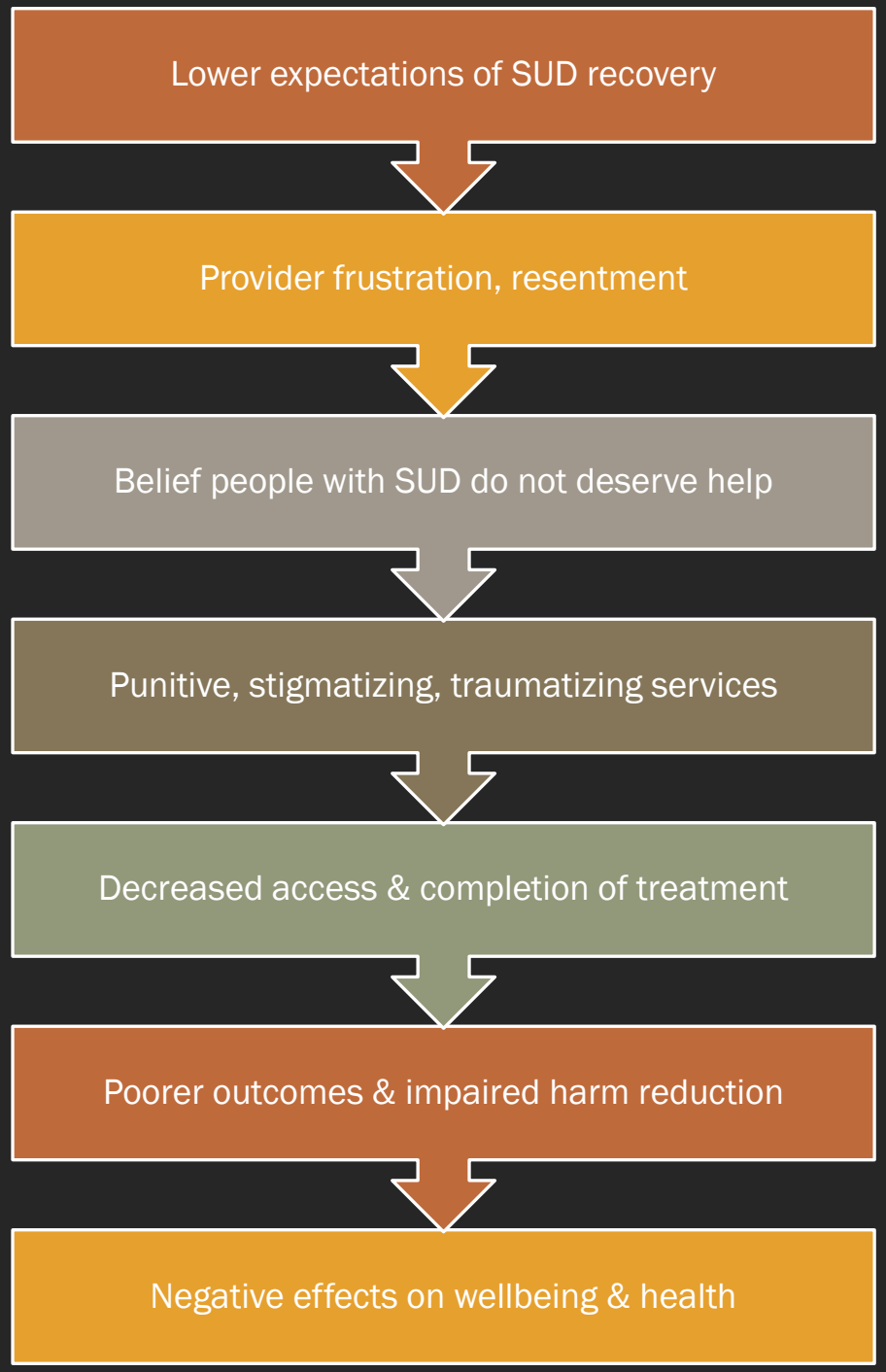


Public stigma woven into systems

People who experience substance related disorders face high levels of stigma.

- Lower expectations for health outcomes for people with substance use disorders
- Believe people with SUD do not deserve treatment based on the false belief SUD are within the person' control
- Elicit feelings of frustration and resentment from providers
- Result in punitive policies/practices and avoidable traumatic experiences
- **Leads systems to withhold appropriate services - effectively changing stigma into discrimination**

(Blendon & Benson, 2018; Matusowet al., 2013; SAMHSA, 2013).



Systems Impact People

High levels of stigma lead to adverse individual outcomes:

- ↓ Poorer healthcare outcomes
- ↓ Decreased likelihood of seeking treatment
- ↓ Decreased access to services and treatment
- ↓ Decreased utilization of addiction medicine [only 20% of people access medications for opioid use disorder]
- ↓ Decreased rates of treatment completion
- ➢ Increased use of risky behaviors [ex. share syringes]

"Individuals who use drugs do not forfeit their human rights. These include the right to the highest attainable standard of physical and mental health (including access to treatment, services and care), the right not to be tortured or arbitrarily detained, and the right not to be arbitrarily deprived of their life. Too often, drug users suffer discrimination, are forced to accept treatment, marginalized and often harmed by approaches which over-emphasize criminalization and punishment while underemphasizing harm reduction and respect for human rights." -- Navanethem Pillay

(Blendon & Benson, 2018; Matusowet al., 2013; SAMHSA, 2013).

Impacts of Stigma on Individuals

Treatment

- Less likely to seek treatment, and this results in economic, social and medical costs.
- Discourage people from accessing healthcare services.
- Systems may have additional hoops people have to jump through that are trying to get into treatment. These are people that are already dealing with a substance use disorder, and on top of that trying to access treatment.

Harm Reduction

- Harm Reduction incorporates a spectrum of strategies that includes safer use, managed use, abstinence, meeting people who use drugs "where they're at," and addressing conditions of use along with the use itself.
- Stigma affect public's perception of harm reduction strategies like:
  - Syringe Service Programs proven to reduce HIV and HCV infection rates by about 50%.
- Medication for Opioid Use Disorder (MOUD) effective for long-term success when someone chooses to start treatment (versus being coerced or mandated).

Health & Wellbeing

- Stigma can cause major harm to people in their social lives.
- The chronic stress of discrimination may affect the mental and social health of individuals who use drugs.
- Stigma can lead to feelings of loneliness and isolation, disconnection to community/family.
  - When a person does not have social ties or a person to talk to, they are less likely to reach out for healthcare or treatment.
- They are more likely to be depressed and may hide their drug use from health care providers to avoid stigma and drug shaming.


DEAD END
DEAD END
DESTINATION RECOVERY
CAUTION
INEFFECTIVE
CAUTION
SHORT DURATION
CAUTION
EXCLUSIONARY CRITERIA
Failure of Systems
The person is never the problem, the problem is the problem
CAUTION
INFRASTRUCTURE BARRIERS
DEAD END
CAUTION
WAITING LISTS
DEAD END
TOLL ROAD
CAUTION
LOW INTENSITY
TOLL ROAD
CAUTION
FINANCIAL BARRIERS
CAUTION
MISALIGNED POLICIES

FIGHTING BACK AGAINST STIGMA

People who use drugs receive stigma from healthcare workers, loved ones, and the general public.

Healthcare settings can re-traumatize people using drugs by exposing them to stigma and ineffective or inappropriate treatments

In order to encourage people to reach out for help, it is important to reduce the stigma.

Honoring Self

"People who wonder if the glass is half empty or half full, miss the true point… The glass is refillable." ~ Anonymous

Part of honoring self, is taking care of yourself.

- Social cognitive psychology found providers with higher levels of positive emotions during a clinical encounter **are less likely to stereotype patients.**
- Combat self stigma through building self-esteem and construction of own sense of self and story

Engage in self reflection strategies to increase their awareness of their own biases and stigma around in the environment with time and effort (*more information on next slide*)

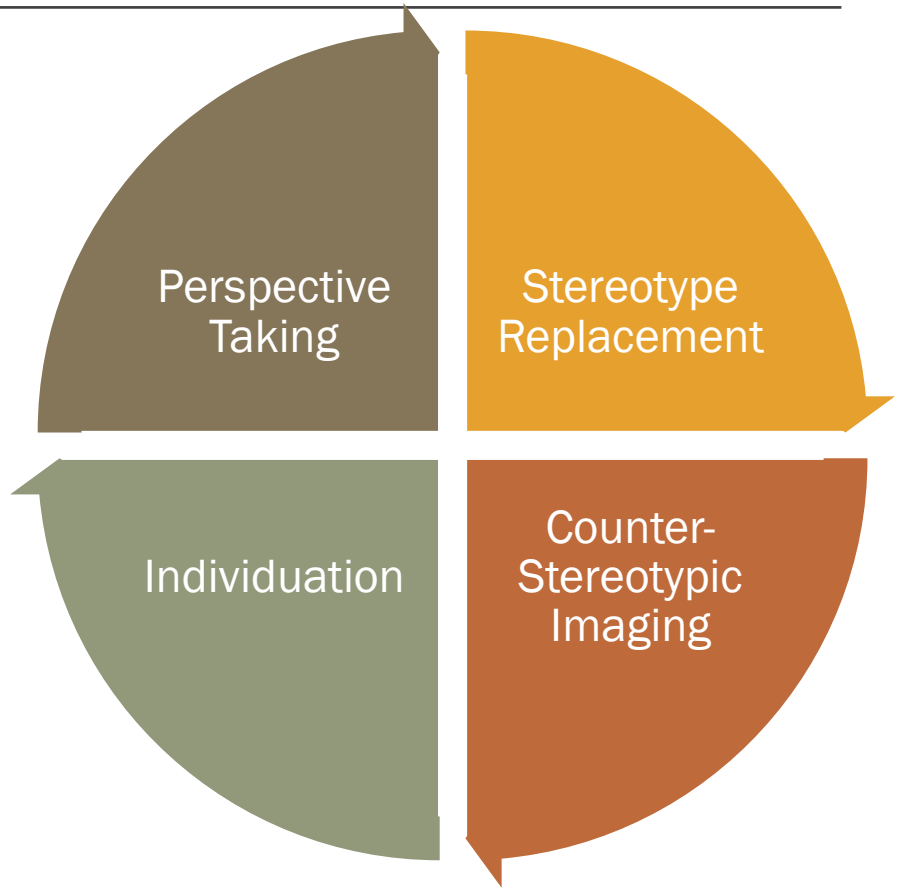
Honoring Relationship: Self-Reflection Strategies to Counter Bias

Perspective taking involves putting yourself in someone else's shoes.

Stereotype replacement involves identifying and developing new response to automatic bias.

Countering stereotypical images involves noting when images reflect stereotypes and creating an image opposite in your mind.

Individuation is a process of humanizing a stereotype by obtaining specific information about group members to prevent biased inferences.



Reflection Strategies

Prevent Compassion Fatigue & Burnout

Negative Effects

- Burnout
- Compassion fatigue
- Secondary traumatic stress
- Vicarious trauma
- Re-traumatization

Encourage Staff Wellness

- Peer collaboration, team spirit and cohesion
- Sense of accomplishment
- Find your balance with clear boundaries
- Self-care – connect to self, others, and culture

Honoring Relationships

"There is nothing greater than we can do as human beings than how people feel in other people's presence and there's a lot of different ways that we do that."

Healing acknowledges past experiences of trauma and the disconnection from cultural foundations over decades and the resulting "*collective soul wound*" (Dr. Eduardo Duran)

Inherent worth and dignity of all people

Examine your own values and biases

Promote historical wellness, resilience and empowerment

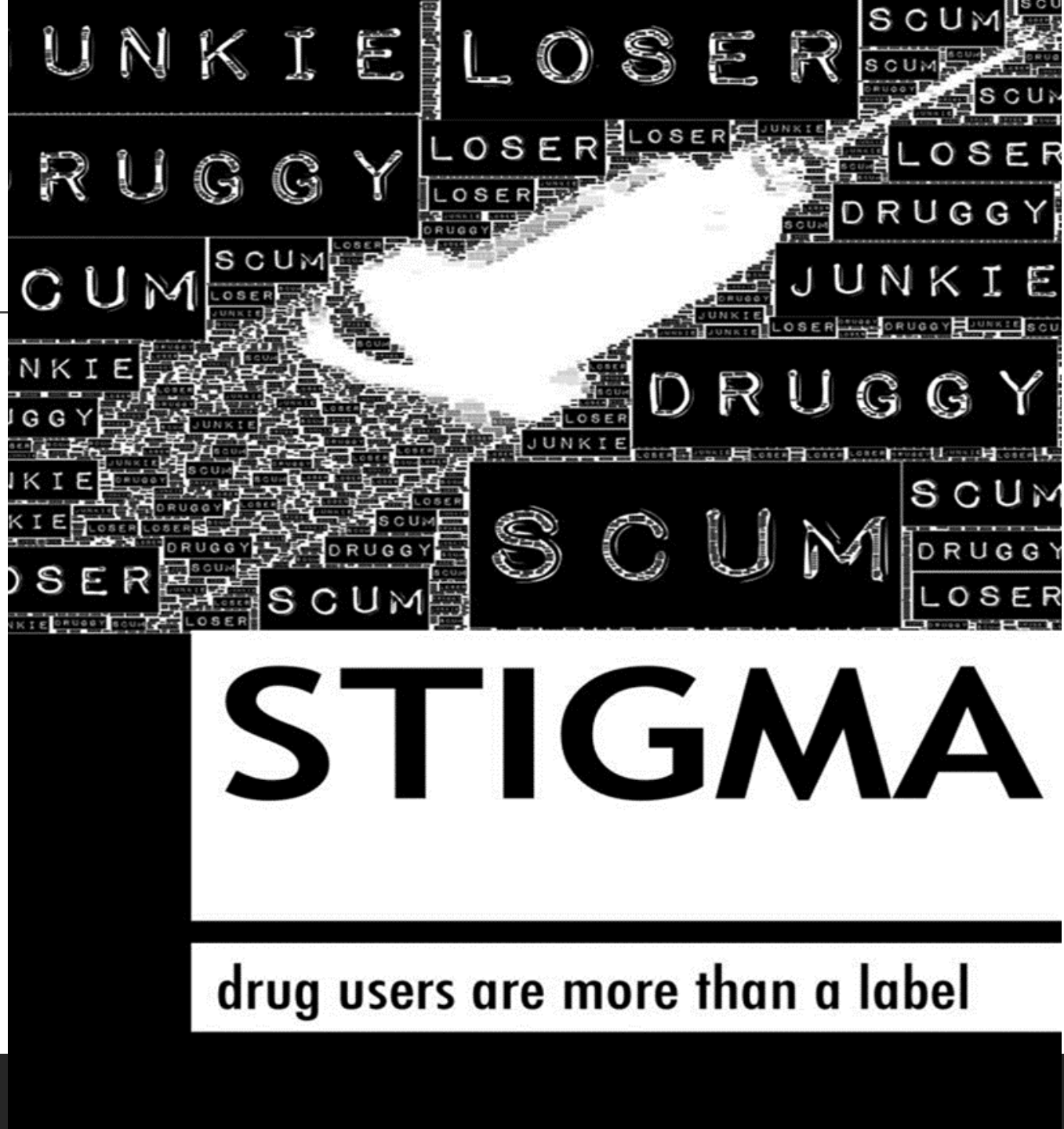
Uplift voices of lived experience

Use accurate and non-stigmatizing language

Words Matter

One way to combat stigma is to change the way we talk about people.

“Protest any labels that turn people into things. Words are important. If you want to care for something, you call it a ‘flower’ but if you want to kill something, you call it a ‘weed.’”



The Real Stigma of Substance Use Disorders

In a study by the Recovery Research Institute, participants were asked how they felt about two people *"actively using drugs and alcohol."*

One person was referred to as a "substance abuser"

The other person as "having a substance use disorder"

No further information was given about these hypothetical individuals.

THE STUDY DISCOVERED THAT PARTICIPANTS FELT THE "SUBSTANCE ABUSER" WAS:

- less likely to benefit from treatment
- more likely to benefit from punishment
- more likely to be socially threatening
- more likely to be blamed for their substance related difficulties and less likely that their problem was the result of an innate dysfunction over which they had no control
- they were more able to control their substance use without help

https://www.recoveryanswers.org/research-post/the-real-stigma-of-substance-use-disorders/

Responsive Communication

Person first language encourages respect and the worth and dignity of all persons

Avoid language that is sensationalizing (e.g., suffering from SUD), free of jargon or speculation

Language is fluid, strengths focused, trauma informed

"*Be careful of how you speak about others. The things you say to others will show up in your children or grandchildren*." – Alaska Native teaching

FROM (Deficit-Based) What is wrong with this person?	TO (Healing-Informed) What has this person been through?
Addict, drug abuser	Person who uses drugs
Patient	Client, customer-owner
Clean/dirty	Tested negative/tested positive
Sober, former addict	People who thrive
Symptoms	Adaptations
Disorder	Response
Attention seeking	The individual is trying to connect in the best way they know how
Borderline	The individual is doing the best they can given their experiences
Controlling	The individual seems to be trying to assert their power
Manipulative	The individual has difficulty asking directly for what they want
Malingering	The individual is seeking help in a way that feels safer

How are you picturing this person?

Case example:

Patient X is a 35-yo construction worker with a history of heroin use receiving medication for opioid use disorder which they receive from your clinic. Patient X has been doing very well and has not used heroin on over a year. Patient X most recent urine drug screen was positive for cocaine, which you plan to address at the next appointment.

A	Age/Generation
D	Disability status (developmental)
D	Disability status (acquired)
R	Religion/Spirituality
E	Ethnicity
S	Socioeconomic status
S	Sexual orientation
I	Indigenous heritage
N	National origin
G	Gender

Citation: PCSS Implicit Bias: https://pcssnow.org/courses/how-does-implicit-bias-impact-addiction-treatment-bias-discrimination/

Implicit Bias

Harvard online implicit association test: https://implicit.harvard.edu/implicit/takeatest.html

These are automatic associations shaped by a person life experiences and societal narratives.

Having biases is normal to human functioning. They are often outside our awareness.

Negative stereotypes influence how we interpret a person's behavior and make decisions for treatment.

- The "Firewater Myth" is a stigmatized belief that American Indians and Alaska Natives (AI/ANs) are more susceptible to the effects of alcohol and vulnerable to alcohol problems due to innate biological or genetic differences. While genetics does play a role in predisposition to developing an alcohol use disorder, this does not affect AIAN more than other racial/ethnic groups (Gonzalez & Skewes, 2017).
- A study found Black people presenting to the emergency room with broken arm or legs were significantly less likely to receive opioid pain medication than were White people. Perpetuated by the stereotypical belief that Black people feel less pain than White people (Hoffman et al., 2016).

Case Example

Patient X is a 35-yo construction worker with a history of heroin use receiving medication for opioid use disorder which they receive from your clinic. Patient X has been doing very well and has not used heroin on over a year. Patient X most recent urine drug screen was positive for cocaine, which you plan to address at the next appointment.

- How would you bring up the positive UA?
- What factors would impact how you address the UA?

Citation: PCSS Implicit Bias: https://pcssnow.org/courses/how-does-implicit-bias-impact-addiction-treatment-bias-discrimination/

Chronic Disease Conversation

Talk to people about addiction in the same way as any other chronic disorders

- If it is a disease model, why not talk about it that way?
- Use medically accurate, person first, non-stigmatizing language
- Engage with the patient as a partner in collaborative treatment planning
- Reflect on treatment progress thoughtful while using language that shows respect

Use basic tenants of motivational interviewing

- Convey warmth and care for a patient's wellbeing
- Use empathetic and nonjudgmental listening
- Ask permission to discuss sensitive topics
- Use open ended questions

Acknowledge own feelings and recognize space to process before talk to client

- Be aware of one's own bias and engage in strategies to counter them

Providers Clinical Support System (2020). Tell Me What to
Patient Conversations. https://pcssnow.org/courses/challenging-patient-conversations-2/

Talking about Drug Use: Start with Caring Curiosity

"Are you struggling to find a vein?"

"Have you ever tried a different sized syringe??

"How do you prefer to shoot or take your drugs?"

"Would you like to take a few different sizes to try?"

"Do you ever need to re-use your syringe? Do you have enough bleach to rinse them out?"

"When you shoot up, where can you get your water from?"

"Can I leave you with a few more so you don't have to re-use as often?"

Start with curiosity, then go beyond

Understanding Culture & Contexts: Contextual Humility

Offer compassionate, non-judgmental support - Inherent worth & dignity of all peoples

Recognizes the reality of social inequalities affect both people's vulnerability to and capacity for effectively dealing with potential harm.

See a person for who they are, not what drugs they use - Consider accessibility and culture - One size does not fit all

Do your research, learn about drug use, dependency, and how it works.

Do your research – Replace negative beliefs with evidence-based facts.

Raise up lived expereince and speak up when you see someone mistreated because of their drug use.

Connection to Resources, Culture & Community

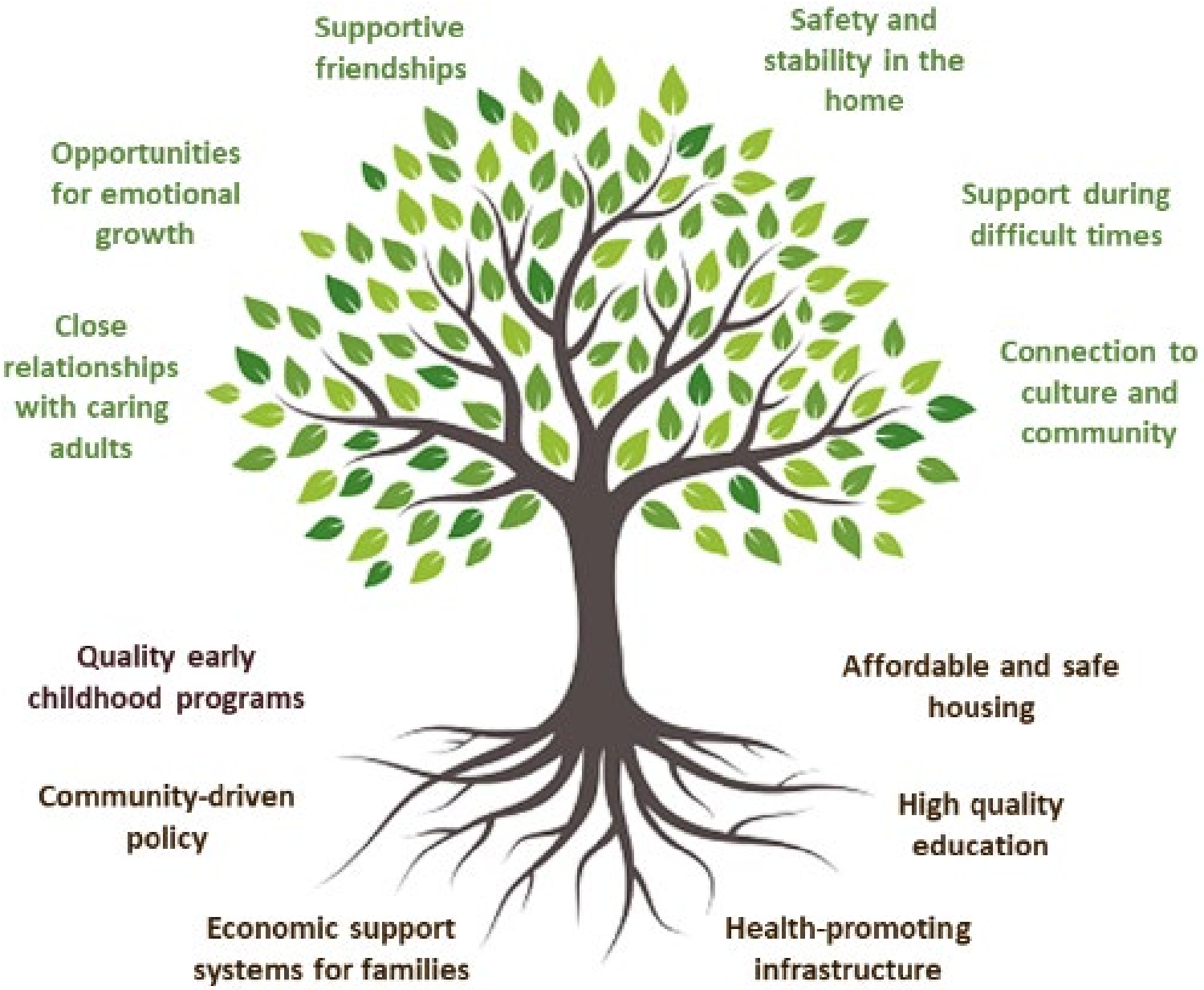
Holding ACEs constant, Counter-ACEs predicted less PTSD and less exposure to stressful life events during pregnancy (Narayan et al., 2018)

More Counter-ACEs associated with reduced depression and improved mental health after accounting for ACEs (Bethel et al., 2019).

Indigenous Protective Factors: Cultural connection promotes resilience and is a protective factor associated with:

- Decrease the probability of drinking problems and family violence.
- Serves as buffers between trauma and health outcomes (Evans-Campbell & Walters, 2023).
- Reduced suicide rates among youth (Chandler & Lalonde, 1998).

Counter-ACEs = ACEs that counter ACEs



Adapted from Center for Community Resilience, Community Resilience Tree

Addressing Stigma: You, Your System, Your Community

Clinical Care

- Promote resilience among stigmatized groups to prevent development of SUD
- Develop, adapt, and apply affirmative EBT
- Leverage acceptance and mindfulness approaches to address internalized stigma and promote positive outcomes
- Provide support for disclosure decisions and processes

Practice Setting

- Use accurate and non-stigmatizing language
- Strive for patient centered care
- Training and education for ALL staff
- Assessment of practices and policies
- Evaluate practice setting-physical atmosphere
- Leadership and/or alliances to shape program with and for people who use drugs
- Outlets for feedback

Advocacy

- Advocate for changes to reduce/prevent structural stigma (e.g., policies that criminalize drug use and deprioritize treatment)
- Protest use of stigma to prevent or treat SUD
- Educate others about drug use and SUD
- Adopt stigma free language in professional and social settings

Dismantling Stigma Together

- What comes to mind when you think of the word addict or alcoholic?
- What comes to mind when you think of relapse?
- What comes to mind when encounter a pregnant woman in active substance use?
- How do you define recovery?

Next, consider…

- Where to these beliefs derive from? Personal experience and belief system, education, science, best practices?
- How is bias impacting delivery of service? Office atmosphere? Engagement with clients?

Moving forward….

- What is one strategies you can start using this week to move towards dismantling stigma?

Engaging People and Reduce Stigma

There are ways to manage and challenge stigma.

Stigma changes over time.

Stigma intersects with other forms of oppression and marginalization.

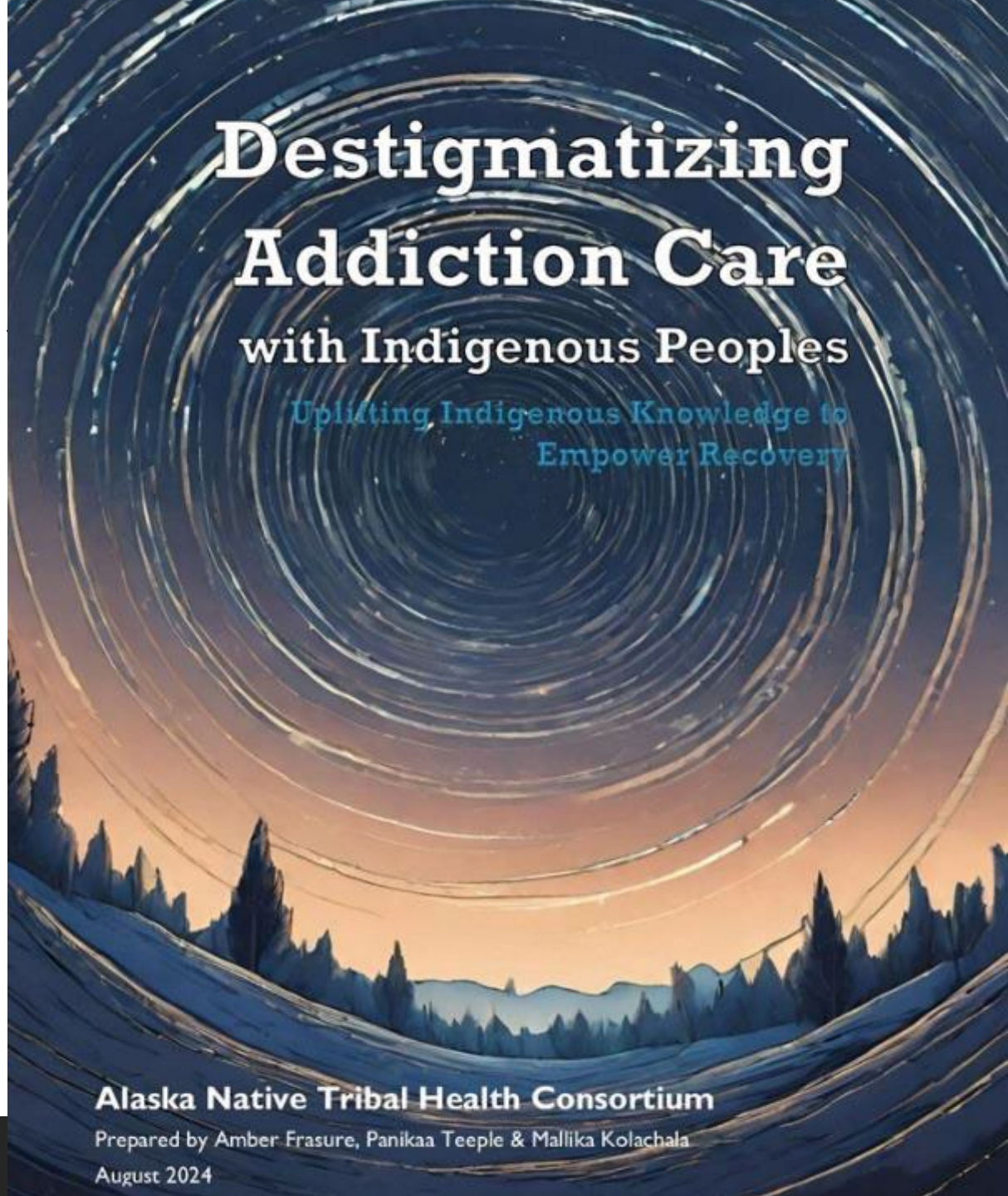
When challenging stigma, meet all people where they're at.

Change is hard. Value incremental change.

Thank you for having me today!

Scan the QR code to access the stigma toolkit or use this link: https://www.iknowmine.org/wp-content/uploads/2024/09/Destigmatizing-Indigenous-Addiction-Care-FINAL.pdf

Amber Frasure asfrasure@alaska.edu



Alcohol-associated Liver Diseases: Awareness is the Cure

Presented by: Kena K. Desai MD
ANTHC Liver Disease and Hepatitis Program

Learning Objectives:

- Recognize that Alaskans suffer from alcohol-associated liver disease mortality at high rates.
- Recognize that AN/AI women of child-bearing age are more affected by alcohol-associated liver disease mortality then AN/AI men.
- Understand that treatment of alcohol use disorder works to prevent development and progression of alcohol-associated liver disease.
- Advise that pharmacotherapy for alcohol use disorder in liver disease, including liver cirrhosis, is safe.

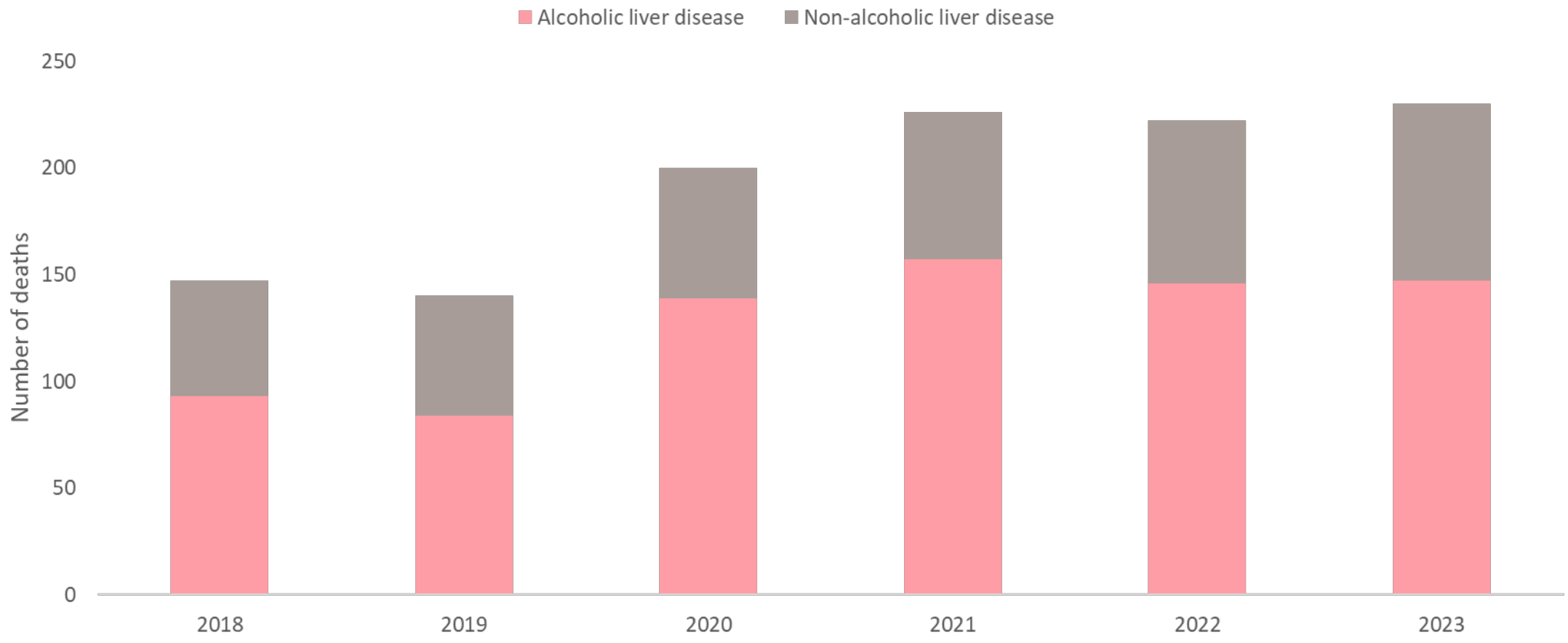
Case 1: Martha is a 30 year old female, with a history of depression, insomnia and alcohol use disorder, that presents for post-hospitalization follow-up for alcohol hepatitis.

- Server in a restaurant, is single and has no children
- She would drink alcohol with co-workers after her restaurant shift ended
- Had been drinking vodka or whiskey, 4 to 6 glasses nightly, for 5 years
- During the Covid-19 pandemic, she lost her job and alcohol use increased to ½ a bottle of "Fifth (750 ml)"
- She had presented to the emergency room 2x for alcohol withdrawal symptoms
- In January 2023, she developed symptoms of abdominal pain/bloating, loss of appetite and fatigue
- In the weeks that followed, she developed yellowing of the eye and skin, as well as swelling of the legs
- She presents to the emergency room in 03/2023 with worsening jaundice, abdominal distention and lower extremity edema

- Vital signs: 98.4 F / HR – 142 / BP – 107/66 / RR-24 / 95% on RA / 60.4 kg / BMI - 24
- Serum Labs: WBC – 24 / platelets – 105 / INR – 2.8 / Total Bilirubin – 18 / AST – 230 / ALT – 190 / alkaline phosphatase - 250
- Ascites Fluid: no indication of spontaneous bacterial peritonitis
- MELD 3.0 score (additional variables to enhance accuracy and address disparity btw. men and women): 34 – > 52% 90 days survival .

- **She is hospitalized for alcohol hepatitis.**

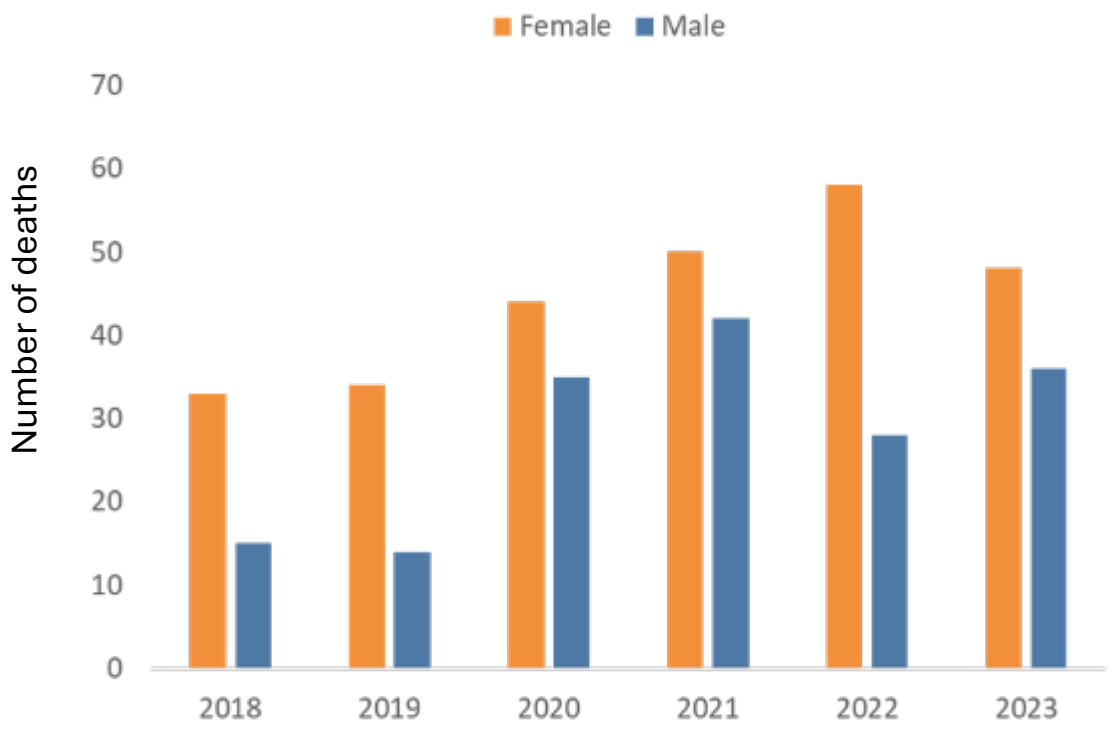
Number of liver disease deaths, alcohol-associated and non-alcohol associated, Alaska residents, 2018 through 2023



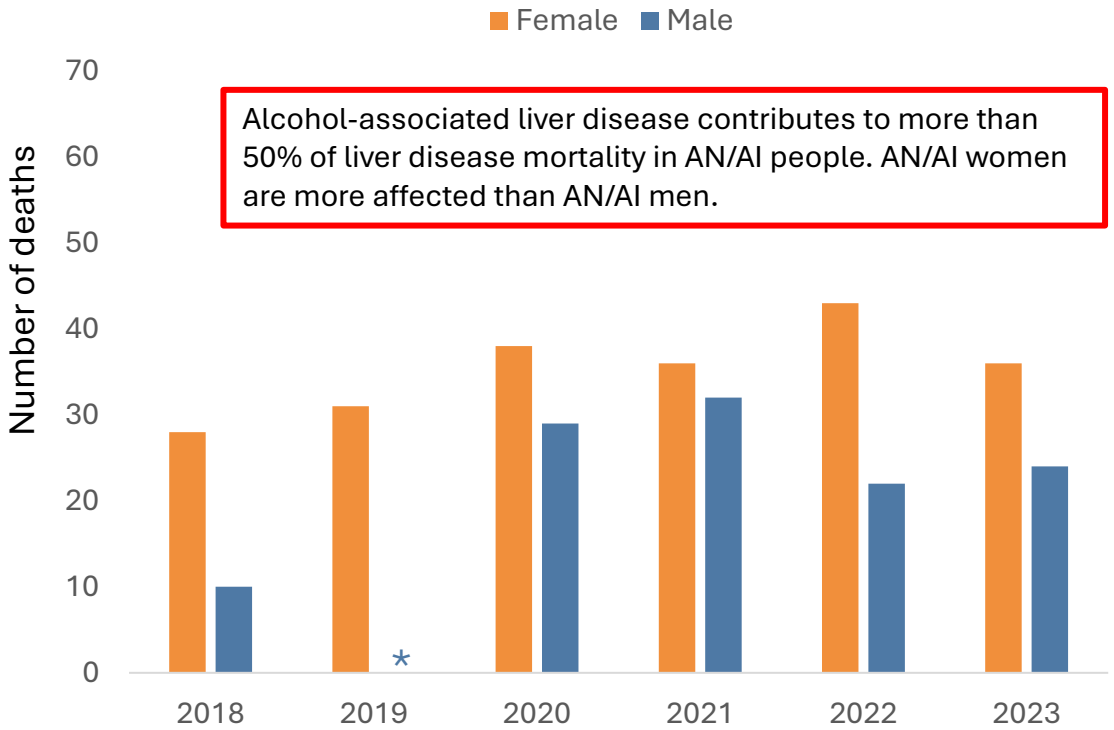
Centers for Disease Control and Prevention, National Center for Health Statistics. National Vital Statistics System, Provisional Mortality on CDC WONDER Online Database. Final Multiple Cause of Death Files, 2018-2021, and from provisional data for years 2022-2024, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

Number of all cause liver disease and alcohol-associated liver disease deaths, Alaska residents, AN/AI, by sex, 2018-2023.

All cause liver disease mortality

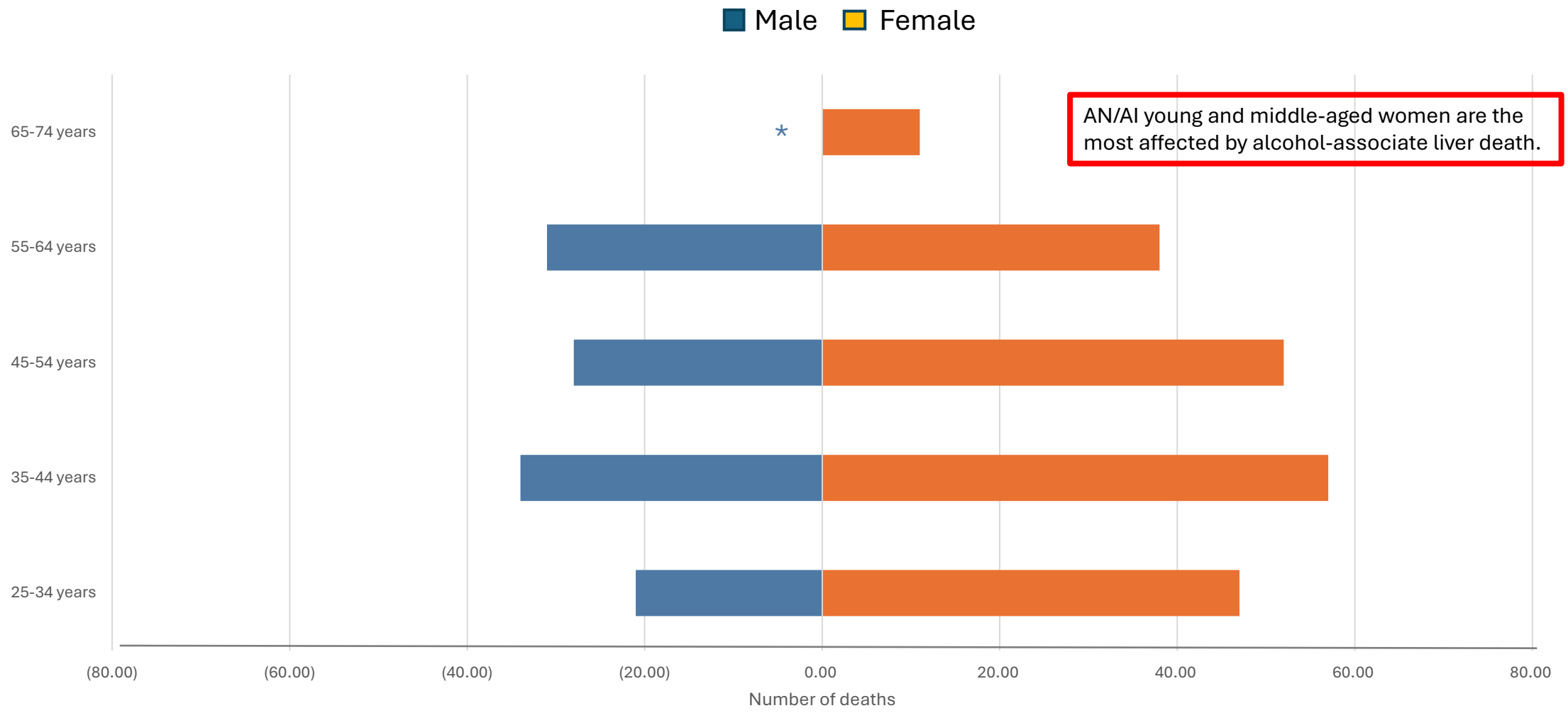


Alcohol-associated liver disease mortality



* Suppressed due to low counts. CDC, National Center for Health Statistics. National Vital Statistics System, Provisional Mortality on CDC WONDER Online Database. Final Multiple Cause of Death Files, 2018-2021, and from provisional data for years 2022-2024, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

Number of alcohol-associated liver disease deaths, Alaska residents, AN/AI only, by sex and ten-year age group, 2018-2023



* Suppressed due to low counts. CDC, National Center for Health Statistics. National Vital Statistics System, Provisional Mortality on CDC WONDER Online Database. Final Multiple Cause of Death Files, 2018-2021, and from provisional data for years 2022-2024, as compiled from data provided by the 57 vital statistics jurisdictions through the Vital Statistics Cooperative Program.

- Martha reports that since her hospitalization she has not drunk alcohol, but is having alcohol cravings, insomnia and severe pain and tingling in her hands and feet.

- She is interested in medications for alcohol cravings, but not in alcohol rehab because she wants to return to work.

- Vital signs: 97.8 F / HR – 110 / BP – 98/66 / RR – 14 / 95% on RA / 54 kg / BMI - 22
- mild icterus, jaundice, + spider angiomata on chest and arms
- abdomen is distended, but soft and no tender, + caput medusa
- Trace lower extremity edema

- Labs: WBC – 12 / platelets – 80 / INR – 2.1 / T.Bil – 11 / AST – 86 / ALT – 60 / Alk Phos - 178
- MELD 3.0 = 28 -> 80%, 90 days survival

- **She asks what will happen if I drink alcohol?**

Awareness is the Cure

Clear message:

- **The only cure for alcohol-associated liver disease is stopping alcohol use.**
- **If you want to live, you can never drink alcohol again.**

Awareness is the Cure

Recognition of Sentinel Events: Emergency room and hospitalizations

1. Alcohol intoxication, withdrawals and alcohol-associated accidents
2. Alcohol hepatitis
3. Alcohol-associated decompensated liver failure

Good evidence that treatment the of the etiological cause of liver disease, alcohol use disorder, improves clinical outcomes.

Etiological cure prevents further decompensation and mortality in patients with cirrhosis with ascites as the single first decompensation event. Tonon et al. Hepatology 2023; 78:1149-1158.

Retrospective design - chart review from 01/2003 to 03/2023.

Study population: (n = 622)
Patients with liver cirrhosis and ascites as the 1st decompensation event.

Primary end point:
- Next decompensation event
- Death
- Liver transplant
- End of study 09/2023

TABLE 1 - Characteristics of patients at inclusion

	Patients (n = 622)
Age (y) – mean ± SD	56.5 ± 11.2
Sex (M vs. F), n (%)	423 (68)
Etiology, n (%)[a]	
HCV	142 (22.8)
HBV	58 (9.3)
Alcohol	366 (58.8)
NASH	75 (12.1)
Autoimmune/cholestatic	30 (4.8)
Other	36 (5.8)

Addiction Specialist

TABLE 2 - Characteristics of patients according to the response to an etiological treatment

	Cured (n = 146)	Controlled (n = 170)	Not controlled (n = 306)	*p*
Age (y), mean ± SD	56.0 ± 10.6	54.7 ± 11.2	57.7 ± 11.4	0.014[a]
Sex (M vs. F), n (%)	103 (70.5)	108 (63.5)	212 (69.3)	0.328
Etiology, n (%)[b]				
HCV	65 (44.5)	6 (3.5)	71 (23.2)	<0.001
HBV	10 (6.8)	25 (14.7)	23 (7.5)	0.024
Alcohol	83 (56.8)	120 (70.6)	163 (53.3)	0.001

Alcohol-Associated liver cirrhosis with ascites:
- 6 months of sobriety = Cured.
- Sobriety maintain through the study period with a median follow=-up of 4 years.

Etiological cure prevents further decompensation and mortality in patients with cirrhosis with ascites as the single first decompensation event. Tonon et al. Hepatology 2023; 78:1149-1158

TABLE 3 - Predictors of further decompensation in multivariable analysis

	Model 1 (including CTP)	
	HR (95% CI)	p
Age (y)	1.02 (1.01–1.03)	0.001
Female (vs. Male)	0.57 (0.41–0.78)	<0.001
Creatinine (mg/dL)	1.04 (0.90–1.21)	0.560
Sodium (mmol/L)	0.95 (0.93–0.96)	<0.001
Alcohol etiology	1.01 (0.78–1.28)	0.956
Varices at inclusion (vs. no varices)	1.45 (1.12–1.87)	0.005
CTP class		
B (vs. A)	1.64 (1.19–2.26)	0.002
C (vs. A)	2.03 (1.37–3.01)	<0.001
Etiologic treatment		
Cured etiology (vs. not controlled)	0.46 (0.29–0.73)	0.001
Controlled etiology (vs. not controlled)	0.87 (0.26–1.21)	0.423
Era (before 2014 vs. 2014–2021)	1.00 (0.79–1.27)	0.996

Abbreviation: CTP, Child-Turcotte-Pugh score.

Etiological cure was independently associated with fewer decompensation events (p =0.001).

TABLE 4 - Risk of each further decompensation according to etiological cure and controlled etiology (adjusted for age, sex, CTP class, creatinine, varices, sodium, etiology, era)

	HR (95% CI)	p
Refractory ascites		
Cured etiology (vs. not controlled)	0.331 (0.151–0.624)	0.001
Controlled etiology (vs. not controlled)	0.933 (0.599–1.451)	0.757
Variceal bleeding		
Cured etiology (vs. not controlled)	0.430 (0.159–1.146)	0.091
Controlled etiology (vs. not controlled)	1.169 (0.600–2.287)	0.641
HE		
Cured etiology (vs. not controlled)	0.502 (0.301–0.837)	0.008
Controlled etiology (vs. not controlled)	0.798 (0.522–1.22)	0.300
HRS-AKI		
Cured etiology (vs. not controlled)	0.328 (0.124–0.865)	0.024
Controlled etiology (vs. not controlled)	0.649 (0.334–1.262)	0.203
SBP		
Cured etiology (vs. not controlled)	0.411 (0.212–0.793)	0.008
Controlled etiology (vs. not controlled)	0.734 (0.447–1.204)	0.221
ACLF		
Cured etiology (vs. not controlled)	0.357 (0.189–0.673)	0.001
Controlled etiology (vs. not controlled)	0.768 (0.475–01.241)	0.280
HCC		
Cured etiology (vs. not controlled)	0.943 (0.522–1.701)	0.847
Controlled etiology (vs. not controlled)	0.711 (0.366–1.379)	0.313

Abbreviations: ACLF, acute-on-chronic liver failure; HRS-AKI, hepatorenal syndrome acute kidney injury; SBP, spontaneous bacterial peritonitis.

Etiological cure prevents further decompensation and mortality in patients with cirrhosis with ascites as the single first decompensation event. Tonon et al. Hepatology 2023; 78:1149-1158

TABLE 5 - Predictors of mortality in multivariable analysis

	Model 1 (including CTP)	
	HR (95% CI)	***p***
Age (y)	1.04 (1.02-1.05)	< 0.001
Female (vs. male)	0.57 (0.41–0.78)	<0.001
Creatinine (mg/dL)	1.09 (0.93–1.27)	0.270
Sodium (mmol/L)	0.97 (0.94–1.01)	0.142
Alcohol etiology	0.99 (0.74–1.32)	0.962
Varices at inclusion (vs. no varices)	1.21 (0.89–1.62)	0.219
CTP class		
B (vs. A)	1.89 (1.30–2.74)	<0.001
C (vs. A)	1.95 (1.21–3.15)	0.005
Etiologic treatment		
Cured etiology (vs. not controlled)	0.35 (0.23–0.56)	<0.001
Controlled etiology (vs. not controlled)	0.72 (0.51–1.02)	0.064
Era (before 2014 vs. 2014–2021)	0.82 (0.61–1.11)	0.211

Abbreviation: CTP, Child-Turcotte-Pugh score.

During the follow-up period (4 years):

- 250 people died = 40% (199 were due to liver disease)
- 140 people underwent liver transplantation = 17%

Etiological cure was associated with lower risk of liver related mortality ($p < 0.001$).

Control of the etiology did not reach statistical significance for decompensation events (p -0.423) or mortality (p – 0.064).

"…the aim of etiological treatment in alcohol-associated liver cirrhosis should be complete abstinence."

Awareness is the Cure

Ask: Why do you drink alcohol?

Grief
Fear of withdrawal
Uncontrolled Pain / neuropathic pain
Insomnia
Anxiety/ Depression
Boredom

Address: the reason why they are drinking excessively.

I asked Martha why she drinks alcohol?

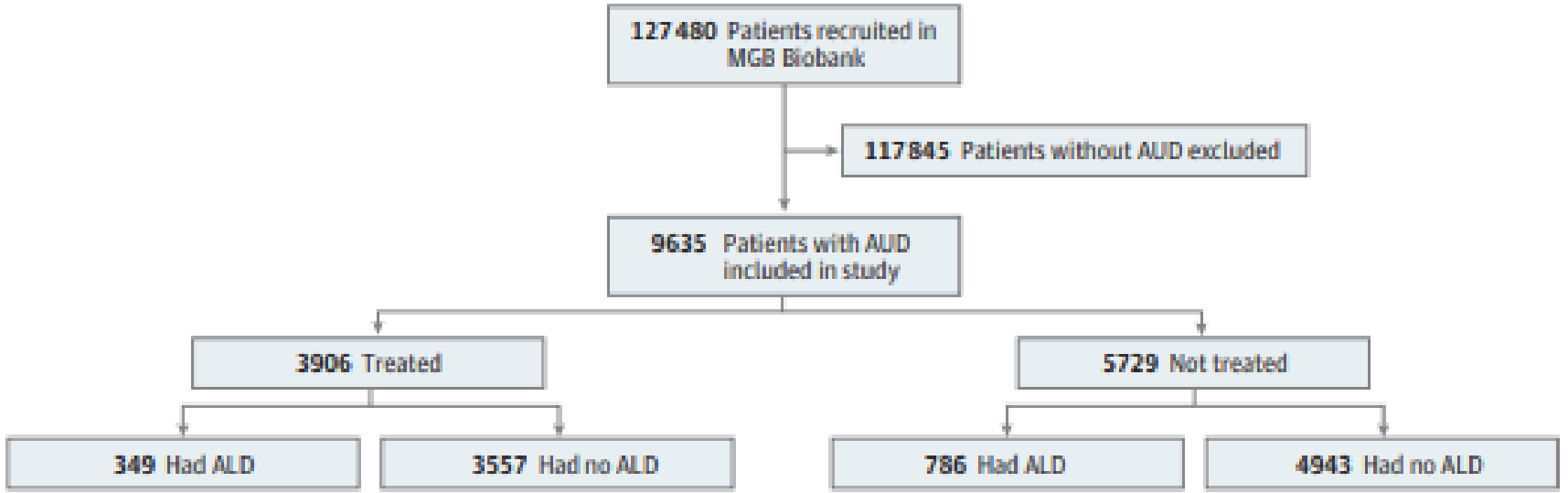
- Initially it was for fun and enjoyment with friends.
- Then her cousin passed away and she drank alcohol heavily for several weeks.
- After that, she was able to decrease the alcohol use but was not able stop daily alcohol drinking.
- She needed the alcohol to help her fall asleep.
- Covid-19 pandemic happened; she lost her job. She started drinking alcohol out of boredom.
- Would need to drink alcohol in the morning to prevent anxiety and palpitations.
- After a few months, she developed severe pins and needle sensation in her hands and feet. She would drink alcohol to decrease those symptoms and so that she could fall asleep.

She asks is it safe for her to take medications for alcohol cravings like naltrexone?

Incidence and Progression of Alcohol-Associated Liver Disease After Medical Therapy for Alcohol Use Disorder. AGL Vannier et al. JAMA Network Open. 2022 5(5)

- Retrospective Design
- Mass General Brigham Biobank
- Period of study 2010 – 2021 – mean follow-up period was 10 years
- Patient with alcohol use disorder (AUD), with and without cirrhosis -> treatment with medical addiction therapy (MAT) was compared to no treatment.

Figure 1. Flowchart of Patient Selection



Patients with alcohol use disorder (AUD) were considered to be treated if they received 3 prescriptions for at least 1 of the following: disulfiram, acamprosate, naltrexone, gabapentin, topiramate, or baclofen. ALD indicates alcohol-associated liver disease; MGB, Mass General Brigham.

Incidence and Progression of Alcohol-Associated Liver Disease After Medical Therapy for Alcohol Use Disorder. AGL Vannier et al. JAMA Network Open. 2022 5(5)

1. Does medical addiction therapy in patients with AUD reduce the risk of developing alcohol-associated liver disease?

Table 2. Odds Ratios for the Development of Alcohol-Associated Liver Disease After Medical Addiction Therapy

Medical addiction therapy	Adjusted odds ratio (95% CI)	*P* value
Any pharmacotherapy	0.37 (0.31-0.43)	<.001
Gabapentin	0.36 (0.30-0.43)	<.001
Topiramate	0.47 (0.32-0.66)	<.001
Baclofen	0.57 (0.36-0.88)	.01
Naltrexone	0.67 (0.46-0.95)	.03
Disulfiram	0.86 (0.43-1.61)	.66
Acamprosate	2.59 (1.84-3.61)	<.001

In patients that were treated with MAT: start time for therapy was 6.4 years after the index diagnosis of AUD!

Incidence and Progression of Alcohol-Associated Liver Disease After Medical Therapy for Alcohol Use Disorder. AGL Vannier et al. JAMA Network Open. 2022 5(5)

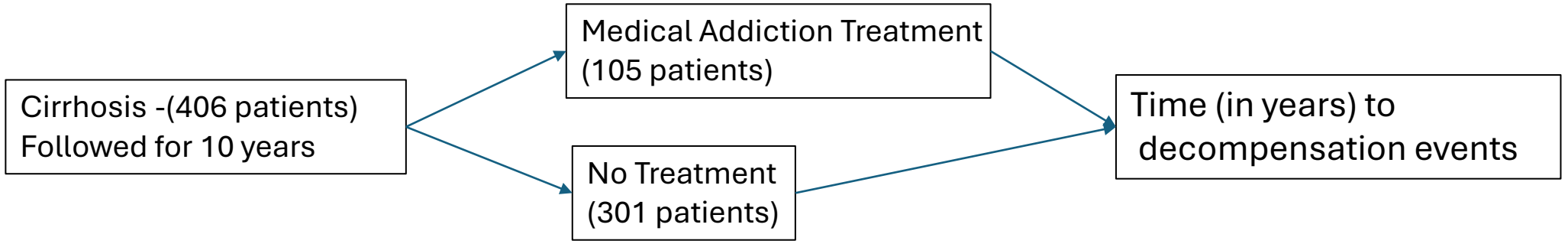
2. Does medical addiction therapy prevent the progress of alcohol-associated liver disease to the first incidence of hepatic decompensation?

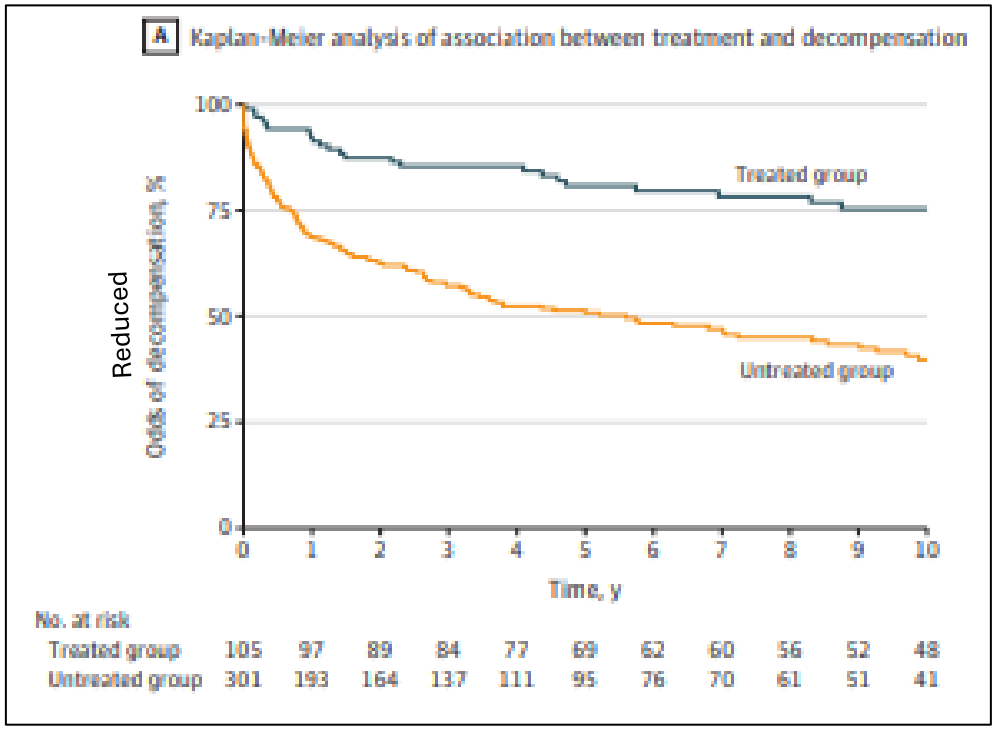
- ascites
- spontaneous bacterial peritonitis
- esophageal varices bleed
- hepatic encephalopathy

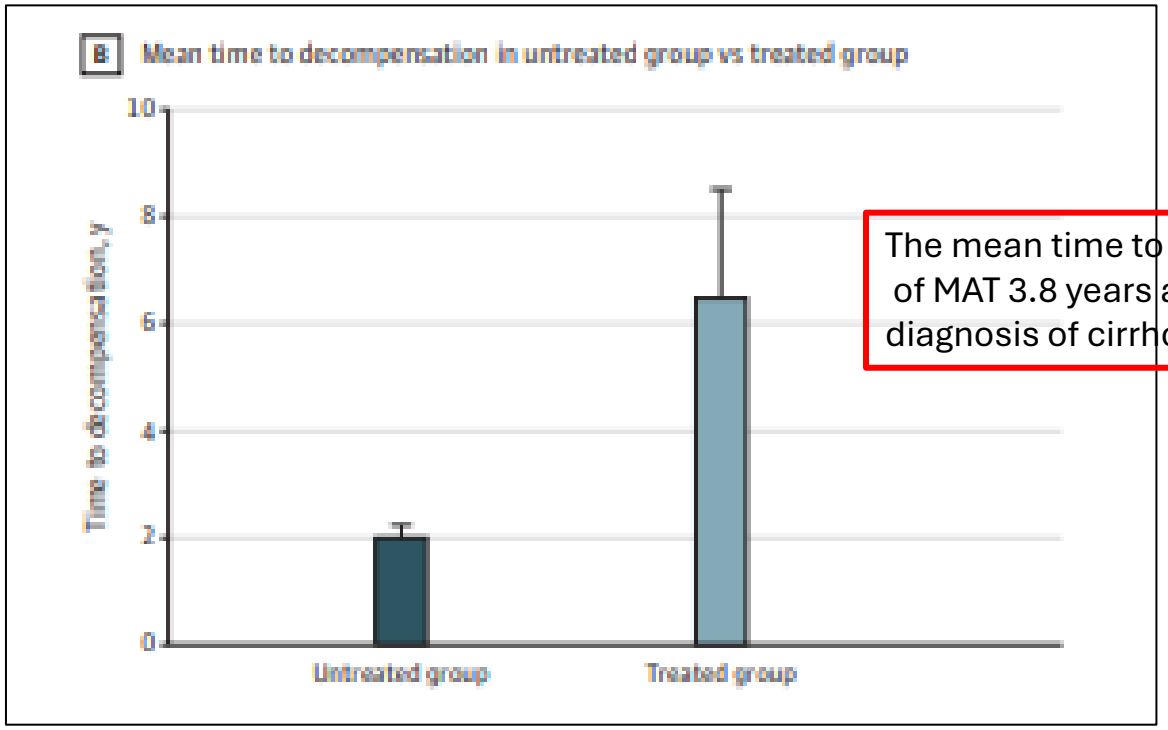
Table 3. Odds Ratios for Developing Hepatic Decompensation After Medical Addiction Therapy

Medical addiction therapy	Adjusted odds ratio (95% CI)	*P* value
Any pharmacotherapy	0.35 (0.23-0.53)	<.001
Naltrexone	0.27 (0.10-0.64)	.005
Gabapentin	0.36 (0.23-0.56)	<.001
Topiramate	0.43 (0.17-0.99)	.05
Baclofen	1.06 (0.39-2.69)	.91
Acamprosate	1.99 (0.99-4.059)	.06
Disulfiram	2.59 (0.54-13.26)	.24

Incidence and Progression of Alcohol-Associated Liver Disease After Medical Therapy for Alcohol Use Disorder. AGL Vannier et al. JAMA Network Open. 2022 5(5)







The mean time to initiation of MAT 3.8 years after the diagnosis of cirrhosis!

Awareness is the Cure

Martha had already completed medical detox while hospitalized (CIWA protocol). She was clinically improving and she thought that she may return to alcohol use due to severe cravings. After discussing and weighing the risks and benefits of Naltrexone:

- She started Naltrexone 50 mg PO daily and Gabapentin 300 mg PO BID, prn for alcohol cravings, anxiety and peripheral neuropathy.

- I also prescribed her gabapentin 600 mg PO QHS, prn for insomnia.

Patient accountability:

- "Although Naltrexone will not make you sick if you drink alcohol; starting Naltrexone means that you are making the commitment to stop alcohol use. You should not drink alcohol."

- Recommended outpatient or inpatient alcohol treatment. If liver transplant is needed in the future some form of structure alcohol treatment is going to be required.

Awareness is the Cure

- Over the next 12 months, I saw Martha in clinic 14 times -> 7 visits for paracentesis.
- She presented to the ED with liver related complications 31 times.
- She was hospitalized 15 times and received numerous paracentesis during the hospitalizations.

  - her longest hospitalization was 27 days

  - total days of hospitalization in the last 12 months was 118 days
- She went to University of Washington for evaluation of liver transplant. She has not been placed on the transplant list because;

  1. lack of consistent support system
  2. inconsistent participation a certified alcohol cessation program

- Current MELD 3.0 = 17

- **She asks what are the chances that she will get a liver transplant.**

ANMC Liver Transplant Data 2013-2023

Alcohol-associated liver cirrhosis is the #1 reason for liver transplant referrals at ANMC.

Listed for liver transplant = 53

Waiting list for transplant = 37

Alcohol-associated liver cirrhosis = 26
Female – 19
Male - 7

Alcohol-Associated liver disease**: 8 died on the transplant list.**
Female - 6
Male - 2

Transplanted = 16

Alcohol-associated liver cirrhosis = 6
Female – 2
Male - 4

Alcohol-associated liver disease: **1 died after transplant**
Female – zero
Male - 1

Liver transplant is still a treatment option, but it is a long road to transplant.
We need to get you set-up with an alcohol treatment program and help you identify good support people.

Case 2: Liz is a 40 year old female, with a history of anxiety and agoraphobia, that presents for evaluation of persistent transaminitis.

- She reports that she has been extremely anxious since her divorce 1 year ago. The main cause of her anxiety is living alone.

- She has gotten in the habit of having 3-4 vodka drinks after work to calm her nerves and help her fall asleep. Before her divorce she would only use alcohol on the weekends.

- A few months ago, she returned to her dry village to visit her father. After 2 days of abstinence, she started experiencing shakes, nausea, insomnia and overwhelming anxiety.

- Her friend gave her "Gab's," which made her symptoms bearable for the rest of her stay in the village.

- When she return to Anchorage she resumed alcohol use.

Vital signs and physical exam are normal.
Labs: AST – 120 / ALT – 40. Total bilirubin and platelets are normal. Viral hepatitis serology was normal.
FibroScan – Steatosis – 310 dB/m, Fibrosis – 7.2 KPa.

AUDIT-C Questionnaire

Patient Name _____ Date of Visit _____

1. How often do you have a drink containing alcohol?

- [ ] a. Never
- [ ] b. Monthly or less
- [ ] c. 2-4 times a month
- [ ] d. 2-3 times a week
- [x] e. 4 or more times a week

2. How many standard drinks containing alcohol do you have on a typical day?

- [ ] a. 1 or 2
- [x] b. 3 or 4
- [ ] c. 5 or 6
- [ ] d. 7 to 9
- [ ] e. 10 or more

3. How often do you have six or more drinks on one occasion?

- [x] a. Never
- [ ] b. Less than monthly
- [ ] c. Monthly
- [ ] d. Weekly
- [ ] e. Daily or almost daily

Audit C = 6

12 ounce beer (5% alcohol)

4-5 ounce glass of wine (12% alcohol)

1-1.5 ounce shot of hard alcohol (40% alcohol)

One unit of an alcoholic beverage contains approximately 12 grams of alcohol. A unit is roughly equivalent to one 12-ounce bottle of beer (5% alcohol); one 4-5-ounce glass of wine (12% alcohol); or one 1-ounce shot of hard liquor (40% alcohol). Note: there are many different kinds of beer and wine available that can contain more alcohol per unit than described above. Always check the label for alcohol content.

Audit C = 9

TABLE

Summary of *DSM-5* diagnostic features for alcohol use disorder[8,a]

Two of the following symptoms/behaviors must be present for at least 1 year, and be co-occurring with significant distress or impairment:

- More alcohol is consumed than intended or is consumed over a longer period of time than intended.
- Efforts to cut back or control drinking have not succeeded.
- Excessive time is spent obtaining, using, or recovering from alcohol.
- Alcohol cravings and urges persist.
- Use of alcohol has impaired follow-through on education, employment, or home obligations.
- Interpersonal problems have been caused or intensified by use of alcohol.
- Alcohol use has led to a reduction in or cessation of recreational, social, and employment activities.
- Use of alcohol has occurred in situations where it is dangerous.
- Alcohol use has continued despite knowledge of the problems it is causing.
- Tolerance to alcohol is evident—ie, drinking the same amount has little effect, or heavier use occurs to maximize alcohol's effects.
- Withdrawal is evident—ie, physiologic signs (tremors, nausea) occur or closely related drugs (eg, benzodiazepines) are taken to avoid withdrawal.

DSM-5, Diagnostic and Statistical Manual of Mental Disorders-5.

[a] Adapted from the *DSM-5*; American Psychiatric Association (2013).

DSM 5 criteria for alcohol use disorder (11):

Mild – 2 to 3
Moderate – 4 to 5
Severe – 6 or more

Diagnosis:
Moderate alcohol use disorder

Treatment:
Behavior health referral

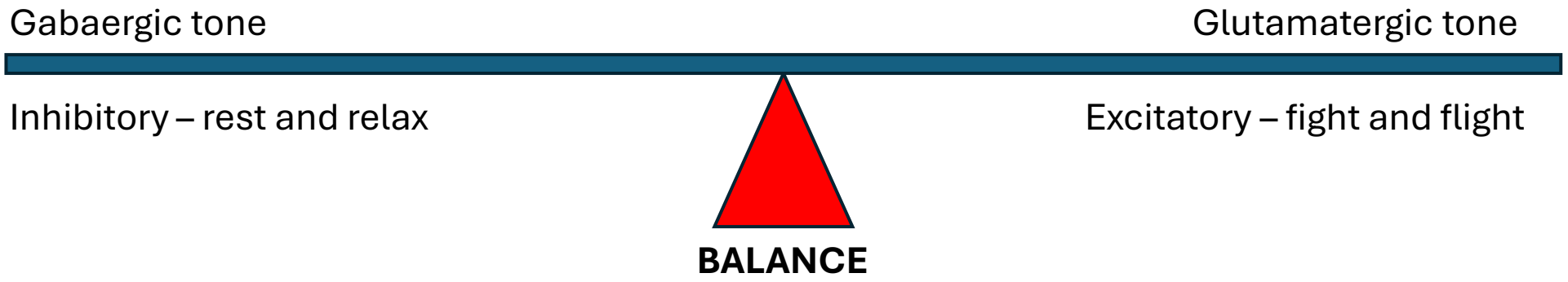
MAT:
Vivitrol 380 mg IM Q monthly
Gabapentin 300 mg PO BID and
600 mg PO QHS

Clearly review the symptoms of severe alcohol withdrawal and when she should go to the ER.

Follow-up with me in 1 month.

It is imperative that you decrease, or even better stop, alcohol use.

Nervous system affects of alcohol and Gabapentin:



Gabapentin safety profile:

1. Not a controlled or scheduled substance
2. Does not potentiate the affects of alcohol
3. Does not cause significant daytime sleepiness or decreased in performance
4. At normally prescribed doses, low risk for dependence and abuse

Abuse potential:

- Recreational opioid and prescription drug abusers – self-administer doses that far exceed therapeutic range
- Abrupt withdrawal of gabapentin in people that are using supratherapeutic doses can precipitate seizures

Medications for alcohol use disorder that I use in my Hepatology clinic.

	Naltrexone/Vivitrol	Gabapentin	Acamprosate (continued Rx from Detox).
Mechanism of action	Pure opioid receptor antagonist	Modulation of the excitatory and inhibitory neural pathways	Modulation of the excitatory and inhibitory neural pathways
Indication	Alcohol use disorder (does not require alcohol cessation to initiate) Opioid use disorder Chronic pain management Weight loss	Alcohol use disorder (off label) Partial epileptic seizures Postherpetic neuralgia Neuropathy (off label) Insomnia / Anxiety (off label)	Alcohol use disorder
Metabolism and clearance	Liver, renal and fecal excretion	None, renal excretion	None, renal excretion
Dosing	Naltrexone 50 mg PO daily Vivitrol 380 mg IM monthly (Vivitrol affect only last about 3 weeks, may need to supplement last week with oral Naltrexone)	Gabapentin 1800 mg PO daily divided BID-TID In renal disease: Decreased dosing is recommended	Acamprosate 666 mg (2 tabs of 333 mg) PO TID In renal disease: Acamprosate 333 mg PO TID CrCl < 30 contraindicated
Caution	Opioid use – can precipitate withdrawal Acute liver failure	Opioid and recreational drug use	TID dosing -> difficult compliance
Adverse Effects	Nausea Vivitrol - injection site reactions	Dizziness Withdrawal seizures when high doses are stopped abruptly	Diarrhea
Number need to treat	No heavy drinking days NNT = 8.6	Unknown and likely will not be studied since gabapentin is already generic	Abstinence NNT = 7.5
Cost	Naltrexone 50 mg (30 tabs) - $25 to$ 30 Vivitrol 380 mg IM Qmonth - $1450	300 to 600 mg (90 tabs) - $12 to $15	333 mg (2 tablets, 180 tabs) - $94.00

Key Points:

- **If your patient has advance liver fibrosis or cirrhosis, for any reason, the recommendation is they should never drink alcohol again.**

- **Etiological cure of alcohol-associated liver disease, ie. abstinence, decreases decompensation and mortality.**

- **Diagnose alcohol misuse and alcohol use disorder early and getting the person treatment will result in better outcomes.**

  (Audit C -> BHC, MAT and most importantly you).

- **Naltrexone and gabapentin have good safely profiles in liver disease; be comfortable using them.**

References:

- **Etiological cure prevents further decompensation and mortality in patients with cirrhosis with ascites as the single first decompensation event. Tonon et al. Hepatology 2023; 78:1149-1158.**

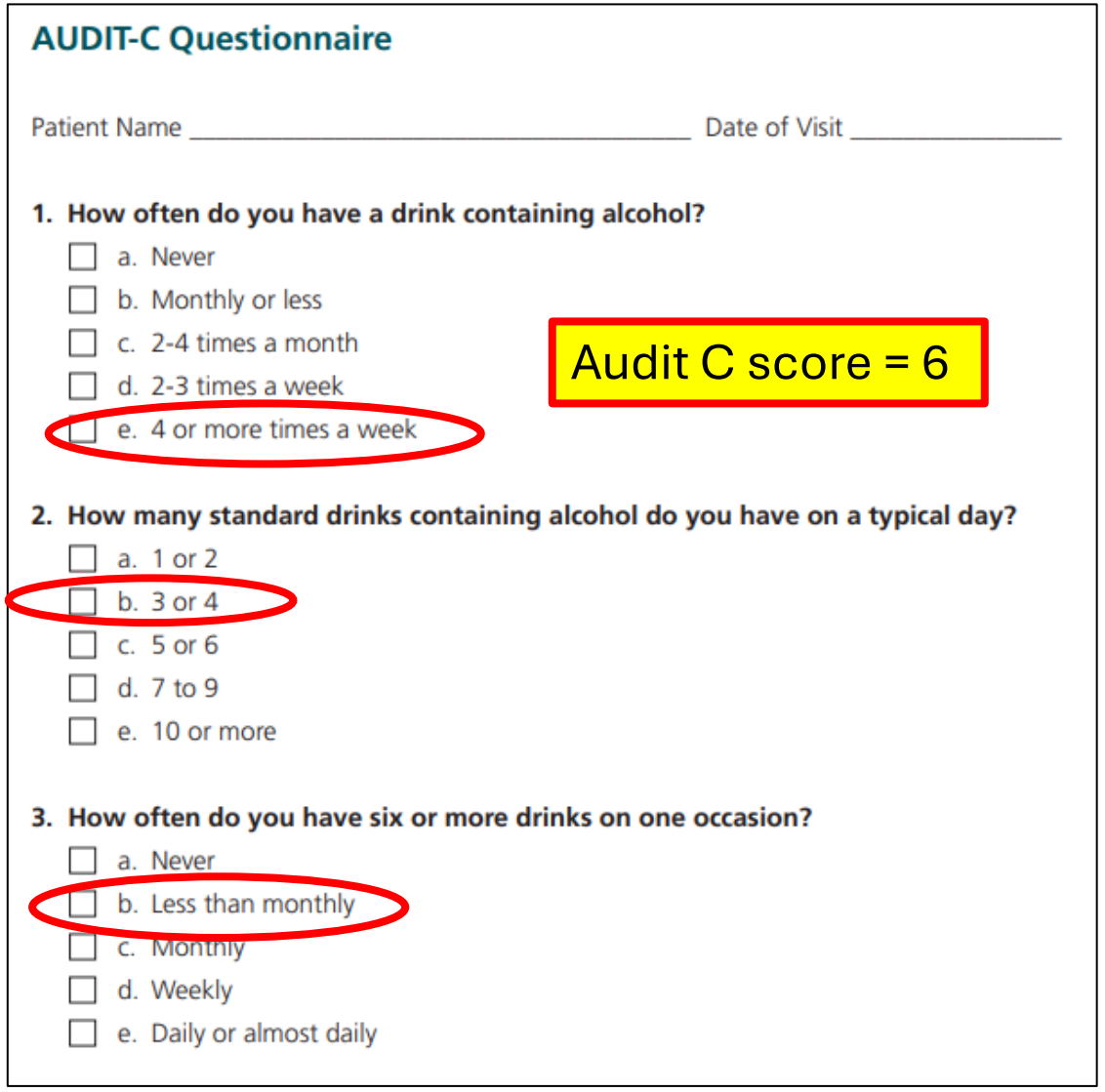
- **Incidence and Progression of Alcohol-Associated Liver Disease After Medical Therapy for Alcohol Use Disorder. AGL Vannier et al. JAMA Network Open. 2022 5(5).**

- **Ayyala et al. Naltrexone for alcohol use disorder: Hepatic saftety in patients with and without liver disease. Hepatology Communications. 2022 Oct 25. doi: 10.1002/hep4.2080.**

- **Mason et al. Gabapentin for the treatment of alcohol use disorder. Expert Opinion Investigating Drugs. 2018. January; 27(1): 113-124. dio: 10.1080.**

Case 3: Mr. Parker is a 48 year old male, with a MHx. of HTN, Hyperlipidemia, OSA, Morbid Obesity (BMI -46) and Type 2 Diabetes, that presents for evaluation of MASLD.

- He works in the IT.
- He is married with 4 children.
- He is on Ozempic 2 mg SubQ weekly for diabetes management. His HgBa1c – 7.2% (8.7% 1 yr ago) and his weight has decreased from 320 to 285 lbs.
- He drinks four 16 oz. of beer every night after work (4 nights/week) to relax and to help him sleep. He has been doing this for over 15 years.
- He states that he is a big guy and the nightly beers hardly affect him.
- FibroScan
  - steatosis score: 375 dB/m
  - fibrosis score: 10.4 KPa



AUDIT-C Questionnaire

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- ☐ b. Monthly or less
- ☐ c. 2-4 times a month
- ☐ d. 2-3 times a week
- ☐ e. 4 or more times a week

Audit C score = 6

2. How many standard drinks containing alcohol do you have on a typical day?

- ☐ a. 1 or 2
- ☐ b. 3 or 4
- ☐ c. 5 or 6
- ☐ d. 7 to 9
- ☐ e. 10 or more

3. How often do you have six or more drinks on one occasion?

- ☐ a. Never
- ☐ b. Less than monthly
- ☐ c. Monthly
- ☐ d. Weekly
- ☐ e. Daily or almost daily

TABLE

Summary of *DSM-5* diagnostic features for alcohol use disorder[8,a]

Two of the following symptoms/behaviors must be present for at least 1 year, and be co-occurring with significant distress or impairment:

- More alcohol is consumed than intended or is consumed over a longer period of time than intended.
- Efforts to cut back or control drinking have not succeeded.
- Excessive time is spent obtaining, using, or recovering from alcohol.
- Alcohol cravings and urges persist.
- Use of alcohol has impaired follow-through on education, employment, or home obligations.
- Interpersonal problems have been caused or intensified by use of alcohol.
- Alcohol use has led to a reduction in or cessation of recreational, social, and employment activities.
- Use of alcohol has occurred in situations where it is dangerous.
- Alcohol use has continued despite knowledge of the problems it is causing.
- Tolerance to alcohol is evident—ie, drinking the same amount has little effect, or heavier use occurs to maximize alcohol's effects.
- Withdrawal is evident—ie, physiologic signs (tremors, nausea) occur or closely related drugs (eg, benzodiazepines) are taken to avoid withdrawal.

DSM-5, Diagnostic and Statistical Manual of Mental Disorders-5.

[a] Adapted from the *DSM-5*; American Psychiatric Association (2013).

DSM-5 criteria for Alcohol Use Disorder
= Zero

Alcohol-Associated Liver Disease: A Guide for Patients.
U.S. Department of Veterans Affairs. www.Hepatits.VA. GOV

12 ounce beer (5% alcohol) = 4-5 ounce glass of wine (12% alcohol) = 1-1.5 ounce shot of hard alcohol (40% alcohol)

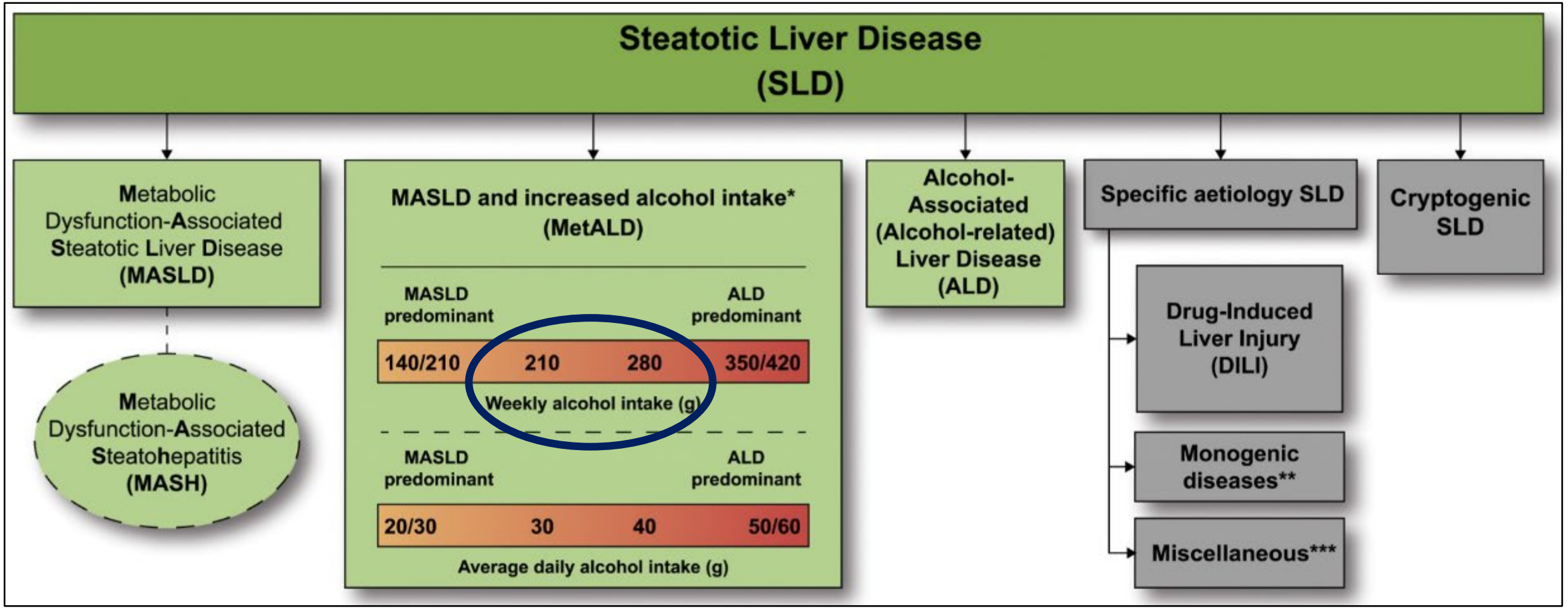
Four 16 oz. beers = 64 grams on nights that he uses alcohol.

64 grams x 4 nights/weekly = 256 grams/weekly

=> 12 grams of alcohol

One unit of an alcoholic beverage contains approximately 12 grams of alcohol. A unit is roughly equivalent to one 12-ounce bottle of beer (5% alcohol); one 4-5-ounce glass of wine (12% alcohol); or one 1-ounce shot of hard liquor (40% alcohol). Note: there are many different kinds of beer and wine available that can contain more alcohol per unit than described above. Always check the label for alcohol content.

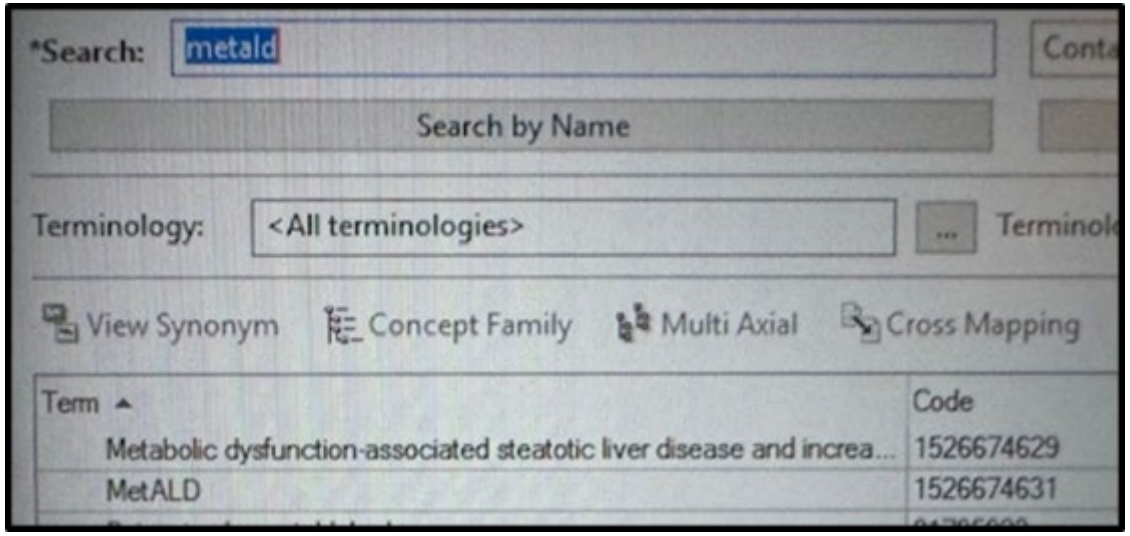
Met-ALD: Metabolic Dysfunction-Associated Steatotic Liver Disease and Increased Alcohol Intake



You have severe steatosis and F2 fibrosis, therefore you should stop all alcohol use.

Main Points for Met-ALD

Diagnostic Code is now available in CERNER.



Use the Audit C to help guide the diagnosis of Met-ALD.

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If you have questions for the ANTHC Liver Disease and Hepatitis Program, please email hepatitis@anthc.org or call 907-729-1560.